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ACKNOWLEDGEMENTS

This is the 25th Data Dictionary of the Australian and New Zealand Neonatal Network (ANZNN) and the third in the new format.

We would like to thank the following members of the ANZNN Data Collection and Operation Committee for their contribution to the continuing development of the ANZNN Data Dictionaries: Kei Lui (Chairperson), Georgina Chambers, Andy Gill, Jim Holberton, Timothy Hong, Caroline Karskens, Peter Marshall, Karen Nothdurft and Victor Samuel Rajadurai.
MAJOR REVISIONS FOR 2018

This section summarises the updates made to the ANZNN 2017 Data Dictionary published online in December 2016.

These new definitions have been agreed to and endorsed by the members of the ANZNN Data Collection and Operation Committee and the ANZNN Advisory Council.

New data items

LateCordClamp  Late cord clamping  
CordMilking    Cord milking       
CardiacUS      Cardiac ultrasound  
CardiacUSDate  Date of first cardiac ultrasound  
CardiacUSTime  Time of first cardiac ultrasound  
WtTfer         Weight at transfer          
WtTferDate     Date weighed at transfer    

Modified data items

None.

Superseded or discontinued data items

WtBackTfer      Weight at back transfer  
WtBackTferDate  Date weighed at back transfer
**GUIDE FOR USE**

To ensure quality of data and reliable benchmarking, please be sure to adhere to the definitions and guidelines in this Data Dictionary. The following provides a guide to the descriptions provided for each data item in the Data Dictionary.

<table>
<thead>
<tr>
<th><strong>ANZNN label:</strong></th>
<th>Data headings submitted electronically are case-sensitive and should be an exact match to the ANZNN label.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Admin status:</strong></td>
<td>‘CURRENT’ indicates that the data item is still in use for the current birth year. The date indicates the first date of birth from which this data item was collected. Superseded and discontinued items will also have an end date provided, which indicates the final date of birth for which this data item was collected.</td>
</tr>
<tr>
<td><strong>Version number:</strong></td>
<td>Specifies the version number of the current data definition.</td>
</tr>
<tr>
<td><strong>Metadata type:</strong></td>
<td>Specifies the metadata type of the data item to be collected.</td>
</tr>
<tr>
<td><strong>Definition:</strong></td>
<td>Provides a description of the data item to be collected.</td>
</tr>
<tr>
<td><strong>Context:</strong></td>
<td>Describes the context in which this data item should be collected.</td>
</tr>
<tr>
<td><strong>Data type:</strong></td>
<td>Specifies the data type in which this data item should be reported.</td>
</tr>
<tr>
<td><strong>Field size:</strong></td>
<td>Specifies the minimum and maximum field size.</td>
</tr>
<tr>
<td><strong>Format:</strong></td>
<td>Specifies the format in which the data item should be reported.</td>
</tr>
<tr>
<td><strong>Data domain:</strong></td>
<td>Describes the numerical options available for multiple choice data items and the corresponding numerical codes required for submission.</td>
</tr>
<tr>
<td><strong>Guide for use:</strong></td>
<td>Further describes guidelines for interpretation of the definition.</td>
</tr>
<tr>
<td><strong>Verification rules:</strong></td>
<td>Defines rules for validation of data.</td>
</tr>
<tr>
<td><strong>Related metadata:</strong></td>
<td>Describes related data items, both current and superseded.</td>
</tr>
<tr>
<td><strong>Source document:</strong></td>
<td>Describes the document(s) from which the data definition was sourced or developed.</td>
</tr>
<tr>
<td><strong>Source organisation:</strong></td>
<td>Describes the organisation(s) from which the data definition was sourced or developed.</td>
</tr>
</tbody>
</table>
REGISTRATION CRITERIA FOR HIGH-RISK NEONATES

Admin status: CURRENT 01/01/2009
Version number: 3
Data element type: DATA ELEMENT CONCEPT

Definition: All live born babies who are admitted to a participating hospital during the first 28 days of life, or who are transferred from a labour ward with the intention of admission to the unit who are also:

- Born at less than 32 completed weeks’ gestation, or
- Less than 1500 grams birth weight, or
- Receive assisted ventilation (intermittent positive pressure ventilation or continuous positive airways pressure or high flow) for four or more consecutive hours (or die while ventilated), or
- Receive major surgery, or
- Receive therapeutic hypothermia

Context: High-risk babies admitted for intensive care.

Guide for use: This applies only to the first hospitalisation of the baby. If the baby is born at home, the first hospitalisation commences on admission to hospital for the first time.

The ANZNN cohort year is based on date of birth, not date of admission.

Related metadata: Supersedes “Registration criteria for high-risk neonates” version 1 – 01/01/1994
Supersedes “Registration criteria for high-risk neonates” version 2 – 01/01/2007

Source organisation: ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection
REGISTRATION HOSPITAL

**ANZNN label:** ‘Hospital’

**Admin status:** CURRENT 01/01/1998

**Version number:** 2

**Definition:** The hospital of registration for a baby is the first level III neonatal intensive care unit that the baby remained in for four or more hours during the first 28 days of life.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Character

**Field size:** Min. 2 Max. 8

**Format:** CCCCCCCC

**Data Domain:** Characters representing the registration hospital code.

**Guide for use:** Babies who received their entire care in a level II hospital or who were not transferred to a level III neonatal intensive care unit during the first 28 days of life are registered to the first level II centre that they remained in for 4 or more hours.

If baby is transferred, she/he is considered to be in the next hospital from the time that the specialist retrieval team (NETS) arrives to collect her/him.

If a baby is transferred from one level III hospital to another level III hospital and NETS arrives at or before 4 hours, then the baby belongs to the second level III hospital. Both hospitals should not provide data to the ANZNN. If there is any uncertainty, audit officers should contact the other hospital to clarify the situation.

If the baby dies within four hours, she/he is registered to unit where she/he dies.

**Related metadata:** Supersedes “Registration hospital” version 1 – 01/01/1994’

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection

**Comments:** This information is coded. Release of information governed by Confidentiality Guidelines.
MATERNAL AGE

ANZNN label: ‘MoAge’

Admin status: CURRENT 01/01/1994
Version number: 1
Metadata type: DERIVED DATA ELEMENT

Definition: Age in completed years of the woman giving birth on the date of the baby’s birth.

Context: High-risk babies admitted for intensive care

Data type: Numeric
Field size: Min. 2 Max. 2
Format: NN

Data domain: Number representing the number of completed years,
If value is missing or unknown use 0

Verification rules: Must be ≥ 10 and ≤ 60

Source organisation: ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
PREVIOUS PRETERM BIRTH

**ANZNN label:** ‘Prevprem’

**Admin status:** CURRENT 01/01/1994

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** This mother has had a previous birth that was at less than 37 completed weeks gestation and more than 20 completed weeks, regardless of outcomes.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**
- 0  No previous preterm birth
- -1 Yes, there was a previous preterm birth
- 99 Unknown

**Source organisation:** ANZNN Advisory Committee; derived from NSW Neonatal Intensive Care Units Data Collection.
**PREVIOUS PERINATAL DEATH**

**ANZNN label:** ‘PrevPnd’

**Admin status:** CURRENT 01/01/1994

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** This mother has had a previous perinatal loss. A perinatal loss is when a baby with a birth weight of more than 400 grams or a gestational age of greater than 20 completed weeks died during the first 28 days of life.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No previous perinatal death</td>
</tr>
<tr>
<td>-1</td>
<td>Yes, has had a previous perinatal death</td>
</tr>
<tr>
<td>99</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

**Source organisation:** ANZNN Advisory Committee; complies NSW Neonatal Intensive Care Units Data Collection.
ASSISTED CONCEPTION IN THIS PREGNANCY

**ANZNN label:** ‘AssistConc’

**Admin status:** CURRENT 01/01/1994

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Type of infertility treatment, if any used during the conception or used to conceive this pregnancy.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:**

0 **Unknown** – information not available.
1 **None** – no infertility treatment used for this pregnancy.
2 **Hyperovulation** – any hormone therapy used to stimulate ovulation.
3 **IVF/GIFT etc.** – any method of in-vitro fertilisation. Includes in-vitro fertilisation, gamete intra-fallopian transfer, zygote intra-fallopian transfer, etc.
4 **Other** – other infertility treatment not mentioned above, including artificial insemination.

**Guide for use:** Disregard any treatment for a previous pregnancy.

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
ETHNICITY OF MOTHER

**ANZNN label:** ‘Ethnicity’

**Admin status:** CURRENT 01/01/1994

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Ethnic origin of the mother of the baby, as identified by the mother.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:**
- **0** Unknown – information not available
- **1** Aboriginal – is a person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community in which she lives. If yes, must answer ‘Indigenous Status’
- **2** Asian – all whose ethnic background originates from the countries of Asia, South East Asia and Indian subcontinent. For example, Fijian Indian
- **3** Caucasian – all of Caucasoid heritage, including European, Russian, Middle Eastern and Arabic.
- **4** Other – includes Indigenous Africans, African Americans, Native Americans and Inuit. There is a separate category for Pacific Islander and Māori.
- **5** Pacific Islander – all from Pacific Islander background, including Samoan, Cook Islands Māori, Niuean, Tokelauan, and other Pacific Islands groups e.g., Hawaiian, Tahitian. Excludes Māori.
- **6** Māori – a person of New Zealand Maori descent who identifies as Māori.

**Guide for use:** Ethnicity is determined by patient self-identification.

**Related metadata:** Is supplemented by “Indigenous status”

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
INDIGENOUS STATUS

**ANZNN label:** ‘Indig’

**Admin status:** CURRENT 01/01/2001

**Version number:** 3

**Metadata type:** DATA ELEMENT

**Definition:** An Aboriginal or Torres Strait Islander is a person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community in which she lives.

**Context:** High-risk babies admitted for intensive care. Given the gross inequalities in health status between indigenous and non-indigenous people of Australia, the size of the Aboriginal and Torres Strait Islander populations and their historical and political context, there is a strong case for ensuring that the information on indigenous status is collected for planning and services delivery purposes and for monitoring Aboriginal and Torres Strait Islander health.

**Data type:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:** 0 Unknown – information not available.
1 Aboriginal but not Torres Strait Islander origin
2 Torres Strait Islander not Aboriginal origin
3 Aboriginal and Torres Strait Islander origin
4 Neither Aboriginal nor Torres Strait Islander origin

**Guide for use:** There are three components to the definition: Descent, Self identification, Community acceptance.

The classification for ‘Indigenous status’ has a hierarchical structure of two levels. There are four categories at the detailed level of the classification, which are grouped into two categories at the broad level. There is one supplementary category for ‘not stated’ responses. The classification is as follows:

**Indigenous**
- Aboriginal but not Torres Strait islander Origin
- Torres Strait Islander not Aboriginal origin
- Both Aboriginal and Torres Strait Islander origin

**Non-Indigenous**
- Neither Aboriginal nor Torres Strait Islander origin

**Not stated**

**Related metadata:** Is supplemented by “Ethnicity of Mother”.

**Source organisation:** Standards for Statistics on Cultural and Language Diversity, ABS Catalogue No. 1289.0, November 1999. Australian Bureau of Statistics
SOURCE OF REFERRAL TO REGISTRATION HOSPITAL

**ANZNN label:** ‘ReferSource’

**Admin status:** CURRENT 01/01/1994

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Source of the most recent referral to the neonatal intensive care unit where baby is registered.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:**

0 *Unknown* – Information not available

1 *Booked at tertiary obstetric hospital* – Mother booked into a hospital with a neonatal intensive care unit and was not transferred during the most recent admission

2 *In-utero transfer from obstetric hospital* – Mother transferred during most recent admission, baby in utero

3 *Ex-utero retrieval* – Baby transferred from any other hospital by a retrieval team with specialist neonatal training, using appropriate equipment. This includes transfers by NETS and WANTS

4 *Ex-utero transfer* – Baby transferred from any other hospital, by a non-specialist transfer method. This includes transport by ambulance

5 *Other* – Includes born in transit, not booked

6 *Booked at this level II unit* – Mother booked into this non-tertiary hospital, no neonatal intensive care unit (for level II units only)

7 *In-utero transfer to this level II unit* – Mother transferred during most recent admission, baby in utero (for level II units only)

8 *Ex-utero retrieval to this level II unit* – Baby retrieved from any other hospital by a specialist neonatal transport retrieval team using appropriate equipment (for level II units only)

9 *Ex-utero transfer to this level II unit* – Baby transferred from any other hospital, by a non-specialist transfer method. This includes transport by ambulance (for level II units only)

**Guide for use:** If there is more than one source of referral, the most recent is to be used. Items 6 to 9 are for babies registered to non-tertiary hospitals.

**Source organisation:** ANZNN Advisory Committee; derived from NSW Neonatal Intensive Care Units Data Collection.
PRESENTING ANTENATAL PROBLEM

ANZNN label: ‘PresentingProb’

Admin status: CURRENT 01/01/1998
Version number: 2
Metadata type: DATA ELEMENT

Definition: The antenatal complication that the mother presented with in this pregnancy that started the train of events that led to this baby’s birth.

Context: High-risk babies admitted for intensive care

Data type: Numeric
Field size: Min. 1 Max. 1
Format: N

Data domain:
0 Unknown – Presenting problem is unknown
1 Preterm pre-labour rupture of membranes – Confirmed spontaneous rupture of membranes (ROM) occurring prior to the onset of labour, and before 37 completed weeks’ gestation. ROM is defined as the obvious gush of clear amniotic fluid from the vagina, or (if fluid is available) by differentiation with urine and vaginal secretions
2 Preterm labour – The presence of regular painful contractions, leading to progressive effacement and dilatation of the cervix, eventually leading to the birth of the baby, and commencing before 37 completed weeks’ gestation
3 Hypertension in Pregnancy – A systolic blood pressure ≥ 140 mmHg and/or diastolic blood pressure ≥ 90 mmHg, or a rise in systolic blood pressure ≥ 25 mmHg and/or a rise in diastolic blood pressure ≥ 15 mmHg from blood pressure reading before conception or in the first trimester (confirmed by two readings six hours apart)
4 Antepartum haemorrhage – Significant haemorrhage in the time from 20 weeks gestation to the end of second stage of labour. Excludes a ‘show’
5 Suspected intrauterine growth restriction – a condition where this fetus fails to reach its genetically predetermined full growth potential due to intrinsic or extrinsic factors. Based on more than one obstetric ultrasound
6 Fetal compromise – Any ‘distress’ of this fetus leading to intervention by the obstetric team
7 Other – Other significant antenatal complication, not specified
8 None – No presenting problem. Baby must be born at term
9 Antenatal diagnosis of fetal malformation – fetal malformation diagnosed prior to birth by any method. This prenatal diagnosis may or may not be confirmed after birth

Guide for use: Only one complication to be selected here other complications of pregnancy are listed under Antenatal complications. If the baby is preterm there must be a presenting problem. eg. Preterm labour
In cases of babies from multiple births, complication relates to this baby only. *Multiple pregnancy is not a presenting antenatal problem*, it is coded under ‘plurality’.

Fetal distress is not confined to cardiotocography. It includes evidence of fetal compromise provided by measurement of umbilical or middle cerebral artery blood flow.

**Related metadata:** Supersedes “Presenting problem” version 1 – 01/01/1994


**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
ANTENATAL COMPLICATIONS

**ANZNN label:** ‘Other_prob’

**Admin status:** CURRENT  01/01/2011

**Version number:** 2

**Metadata type:** DATA ELEMENT

**Definition:** The presence of any antenatal complications during this pregnancy including that chosen as the presenting antenatal problem.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**
- 0  No antenatal complications present
- 1  Yes, antenatal complications were present
- 99 Unknown

**Guide for use:**
This is intended to be a summary of the list of specific antenatal complications

- preterm labour
- hypertension in pregnancy
- antepartum haemorrhage
- suspected intrauterine growth restriction
- fetal compromise
- other antenatal complications

Note: The presenting antenatal problem is included.

Note: It does not include antenatal steroids or MgSO₄.

**Related metadata:** Supersedes “Antenatal complications” version 1 – 01/01/1994.

Variable name has changed from ‘Other prob’ to ‘Other_prob’ from 01/01/2012.

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
PROLONGED RUPTURE OF MEMBRANES (DISCONTINUED)

**ANZNN label:** ‘PROM’

**Admin status:** 01/01/1994 – 31/12/2011

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Confirmed spontaneous membrane rupture for more than 24 hours before birth of the baby. Rupture of the membranes is diagnosed by the obvious gush of clear amniotic fluid from the vagina, or (if fluid is available) by differentiation with urine and vaginal secretions.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**
- 0  No, membranes not ruptured or ruptured for less than 24 hours
- 1  Yes, membranes ruptured for more than 24 hours
- 99 Unknown


**Source organisation:** ANZNN Advisory Committee; derived from NSW Neonatal Intensive Care Units Data Collection.
PRETERM LABOUR

ANZNN label: ‘PTL’

Admin status: CURRENT 01/01/1994
Version number: 1
Metadata type: DATA ELEMENT

Definition: The presence of regular painful contractions during this pregnancy; leading to the progressive effacement and dilatation of the cervix, eventually leading to the birth of this baby and commencing before 37 completed weeks gestation.

Context: High-risk babies admitted for intensive care

Data type: Numeric
Field size: Min.1 Max. 2
Format: NN

Data domain: 0 No, labour did not commence in the preterm period
-1 Yes, labour commenced in the preterm period
99 Unknown


Source organisation: ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
HYPERTENSION IN PREGNANCY

ANZNN label: ‘PET’

Admin status: CURRENT 01/01/1994
Version number: 1
Metadata type: DATA ELEMENT

Definition: Hypertension in pregnancy is defined as:
• a systolic blood pressure ≥140 mmHg and / or a diastolic blood pressure ≥ 90 mmHg, or
• a rise in systolic blood pressure ≥ 25 mmHg and/or a rise in diastolic blood pressure ≥ 15 mmHg from blood pressure reading before conception or in the first trimester (confirmed by two readings six hours apart).

Context: High-risk babies admitted for intensive care
Data type: Numeric
Field size: Min.1 Max. 2
Format: NN

Data domain: 0 No hypertension in pregnancy detected
-1 Yes, hypertension in pregnancy diagnosed
99 Unknown


Source organisation: ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
ANTEPARTUM HAEMORRHAGE

ANZNN label: ‘APH’

Admin status: CURRENT 01/01/1994
Version number: 1
Metadata type: DATA ELEMENT

Definition: Significant haemorrhage during this pregnancy occurring in the time from 20 weeks gestation to the end of second stage of labour. This excludes a 'show'.

Context: High-risk babies admitted for intensive care

Data type: Numeric
Field size: $\text{Min. } 1 \text{ Max. } 2$
Format: NN

Data domain: 0 No antepartum haemorrhage noted
-1 Yes, antepartum haemorrhage diagnosed
99 Unknown

Source organisation: ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
SUSPECTED INTRAUTERINE GROWTH RESTRICTION

**ANZNN label:** ‘IUGR’

**Admin status:** CURRENT 01/01/1994

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Suspected intrauterine growth restriction of this fetus. A condition of the fetus in which it fails to reach its genetically predetermined full growth potential due to intrinsic or extrinsic factors, and is based on more than one obstetric ultrasound.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min.1 Max. 2

**Format:** NN

**Data domain:**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No intrauterine growth restriction present or suspected</td>
</tr>
<tr>
<td>-1</td>
<td>Yes, intrauterine growth restriction was present or suspected</td>
</tr>
<tr>
<td>99</td>
<td>Unknown</td>
</tr>
</tbody>
</table>


**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
## FETAL COMPROMISE

<table>
<thead>
<tr>
<th><strong>ANZNN label:</strong></th>
<th>‘F_distress’</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Admin status:</strong></td>
<td>CURRENT  01/01/2011</td>
</tr>
<tr>
<td><strong>Version number:</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Metadata type:</strong></td>
<td>DATA ELEMENT</td>
</tr>
</tbody>
</table>

**Definition:** Any 'distress' of this fetus leading to intervention by the obstetric team. The term "fetal distress" has been replaced by "fetal compromise".

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No intervention necessary</td>
</tr>
<tr>
<td>-1</td>
<td>Yes, obstetric intervention required for fetal compromise</td>
</tr>
<tr>
<td>99</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

**Guide for use:** This includes a decision to deliver because of a concern about umbilical or middle cerebral arterial blood flow on Doppler as well as a decision to deliver on the basis of a non reassuring CTG or abnormal scalp pH.

**Related metadata:**

- Supersedes “Fetal distress” version 1 – 01/01/1994
- Supersedes “Fetal distress” version 2 – 01/01/2006

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
OTHER ANTENATAL COMPLICATIONS

**ANZNN label:** ‘Other’

**Admin status:** CURRENT 01/01/1994

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Other significant antenatal complication noted for this baby, not specified.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min.1 Max. 2

**Format:** NN

**Data domain:**
- 0  No other significant antenatal complication
- 1  Yes, other significant antenatal complication
- 99 Unknown

**Guide for use:** This includes any maternal medical illness which might impact on the pregnancy such as diabetes, epilepsy, thyroid disease, ITP, or infection such as Hepatitis C, Hepatitis B, or HIV. Maternal Varicella within 72 hours of birth is an important antenatal complication. Positive maternal group B streptococcal colonisation should be included.

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
ANTENATAL DIAGNOSIS OF FETAL MALFORMATION

ANZNN label: ‘ANDiag_’

Admin status: CURRENT 01/01/1998
Version number: 1
Metadata type: DATA ELEMENT

Definition: A malformation of this fetus was diagnosed prior to birth by any method. This diagnosis may or may not be confirmed after birth.

Context: High-risk babies admitted for intensive care

Datatype: Numeric
Field size: Min. 1 Max. 2
Format: NN

Data domain: 0 No fetal malformation detected prior to birth
-1 Yes, fetal malformation detected prior to birth
99 Unknown

Related metadata: Variable name has changed from ‘ANDiag?’ to ‘ANDiag_’ from 01/01/2012.

Source organisation: ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
DATE OF RUPTURE OF MEMBRANES

**ANZNN label:** ‘ROMDATE’

**Admin status:** CURRENT 01/01/2006

**Version number:** 2

**Metadata type:** DATA ELEMENT

**Definition:** Confirmed spontaneous or induced rupture of membranes. Rupture of the membranes is diagnosed by the obvious gush of clear amniotic fluid from the vagina, or (if fluid is available) by differentiation with urine and vaginal secretions. This includes a hind water leak, even if the leak subsequently closes off.

**Context:** Collection of this information provides a substantially improved capacity for analysis of the relation between duration of membrane rupture and morbidity.

**Data type:** Numeric

**Field size:** Min. 10 Max. 10

**Format:** DD/MM/YYYY

**Data domain:** Valid date

**Guide for use:** There is often some uncertainty about the exact date and time of membrane rupture. It is preferable to provide a “best guess” response to this data item than leave it blank.

**Verification rules:** This field must be less than or equal to date of birth, be consistent with diagnoses and procedure codes, for records to be grouped, otherwise resulting in fatal error.

**Related metadata:** Used in conjunction with “Time of rupture of membranes”.

Variable name has changed from ‘PROMDATE’ to ‘ROMDATE’ from 01/01/2012.

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection
### TIME OF RUPTURE OF MEMBRANES

<table>
<thead>
<tr>
<th>ANZNN label:</th>
<th>‘ROMTIME’</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Admin status:</strong></td>
<td>CURRENT 01/01/2006</td>
</tr>
<tr>
<td><strong>Version number:</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Metadata type:</strong></td>
<td>DATA ELEMENT</td>
</tr>
</tbody>
</table>

**Definition:** The time of confirmed, spontaneous or induced rupture of membranes. Rupture of the membranes is diagnosed by the obvious gush of clear amniotic fluid from the vagina, or (if fluid is available) by differentiation with urine and vaginal secretions.

**Context:** Collection of this information provides a substantially improved capacity for analysis of the relation between duration of membrane rupture and morbidity.

**Data type:** Numeric

**Field size:** Min. 5 Max. 5

**Format:** hh:mm (24 hour clock)

**Data domain:** Valid time

**Guide for use:** There is often some uncertainty about the exact time of membrane rupture. It is preferable to provide a “best guess” response to this data item than leave it blank.

**Verification rules:** This field must be less than or equal to date and time of birth, be consistent with diagnoses and procedure codes, for records to be grouped, otherwise resulting in fatal error.

**Related metadata:** Used in conjunction with "Date of rupture of membranes".

Variable name has changed from ‘PROMTIME’ to ‘ROMTIME’ from 01/01/2012.

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection
## SYSTEMIC ANTIBIOTICS GIVEN TO MOTHER WITHIN 48 HOURS OF BIRTH

**ANZNN label:** ‘MomAntib’

**Admin status:** CURRENT 01/01/2006

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Antibiotic treatment is provided to the mother within the 48 hour period prior to birth with the intent of treating the fetus.

**Context:** High-risk babies admitted for intensive care. Fetal sepsis is associated with poor long term outcome.

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:** 0 No antibiotic given  
-1 Yes, antibiotic given  
99 Unknown – information not available

**Guide for use:** This includes the prophylactic use of penicillin or ampicillin as treatment of Group B Streptococcus. It does not include the prophylactic use of antibiotics to reduce the risk of postoperative wound infection following caesarean section.

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection
ANTENATAL CORTICOSTEROIDS FOR FETAL LUNG ENHANCEMENT

**ANZNN label:** ‘Steroids’

**Admin status:** CURRENT 01/01/1994

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Corticosteroids given antenatally via any route to the mother at a time likely to enhance fetal lung maturation. Excludes steroids given for other reasons.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:**
- 0 **Unknown** – Information not available
- 1 **None** – Corticosteroids not ever given during this pregnancy at a time likely to enhance fetal lung maturation.
- 2 **Incomplete, less than 24 hours** – First dose given at less than 24 hours prior to this baby’s birth.
- 3 **Complete** – More than one dose of corticosteroids given, and first dose was given more than 24 hours and the last dose less than 8 days before baby’s birth.
- 4 **More than 7 days** – Steroids given more than 7 days before the baby’s birth. If two courses given and one is ‘complete’, use complete.

**Guide for use:**

If two courses given, and one fulfils the ‘complete’ criteria, use ‘complete’. If the information of the time of doses given is not available, but two doses are known to have been given appropriately, also use ‘complete’.

If two doses were given more than 7 days before the baby’s birth, and a single dose was given less than 24 hours before birth, use ‘More than 7 days’.

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection
MAGNESIUM SULPHATE GIVEN TO MOTHER WITHIN 24 HOURS OF BIRTH

**ANZNN label:** ‘MagSulphate24’

**Admin status:** CURRENT 01/01/2016

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Magnesium sulphate (MgSO$_4$) is provided to the mother during the 24 hours immediately before birth, either because of maternal preeclampsia or specifically for fetal neuro-protection.

**Context:** Babies born very preterm are at risk of neurologic injury during labour and immediately after birth. MgSO$_4$ has been demonstrated to provide neuroprotection and is recommended be given to the mother when gestational age is less than 30 weeks, when early preterm birth is planned or definitely expected within 24 hours. In the case of planned birth, MgSO$_4$ is recommended to be commenced as close to four hours before birth as possible, however if birth is planned or expected to occur sooner than four hours, administration is recommended, as there is still advantage likely from administration within this time.

**Data type:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:**

- **0** Unknown – Information not available
- **1** MgSO$_4$ not given at all
- **2** MgSO$_4$ stopped > 24 hours before birth
- **3** MgSO$_4$ commenced > 24 hours before birth and stopped < 24 hours before birth
- **4** MgSO$_4$ commenced between 4 to 24 hours before birth
- **5** MgSO$_4$ commenced within 4 hours of birth
- **6** MgSO$_4$ given but details not known
- **7** MgSO$_4$/placebo given for randomised trial

**Guide for use:** In the case of planned birth, treatment is recommended to be commenced as close to four hours before birth as possible.

**Related metadata:** Supersedes “Magnesium sulphate given to mother within 6 hours of birth” version 2 – 01/01/2015

**Source organisation:** ANZNN Advisory Council; Antenatal Magnesium Sulphate for Neuroprotection Guideline Development Panel.
MAGNESIUM SULPHATE GIVEN TO MOTHER WITHIN 6 HOURS OF BIRTH (SUPERSEDED)

**ANZNN label:** ‘MgSO4’

**Admin status:** 01/01/2015 – 31/12/2015

**Version number:** 2

**Metadata type:** DATA ELEMENT

**Definition:** Magnesium sulphate is provided to the mother during the 6 hours immediately before birth, either because of maternal preeclampsia or specifically for fetal neuro-protection.

**Context:** Babies < 32 weeks gestation are at risk of neurologic injury during labour and immediately after birth. MgSO₄ has been demonstrated to provide neuro-protection and is recommended be given to the mother during the six hours immediately preceding birth in pregnancies in which the infant(s) are < 30 weeks gestation. An infusion of 4 hours is optimal but a loading dose and shorter course still provides useful prophylaxis.

**Data type:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:**
1. MgSO₄ not given at all
2. MgSO₄ course finished > 6 hrs before birth (likely to be ineffective)
3. MgSO₄ given as IM injection within 6 hrs of birth
4. MgSO₄ given for < 4 hours within 6 hr time slot (incomplete course)
5. MgSO₄ given by infusion over 4 hrs or more within 6 hrs of birth (complete course)
6. MgSO₄ given but details not known
7. Unknown – Information not available
8. MgSO₄ randomised trial

**Guide for use:** The minimum dose is 4G infused IV over 20 minutes but a complete course of treatment is 4 hours. A short IV infusion or an intramuscular injection given within the 6 hour window is likely to be effective but less so than a 4 hour infusion.

**Related metadata:** Supersedes “MgSO₄ given to mother within 6 hours of birth” version 1 01/01/2012

**Source organisation:** ANZNN Advisory Committee
**BIRTH PLURALITY**

**ANZNN label:** ‘Plurality’

**Admin status:** CURRENT 01/07/1996

**Version number:** 2

**Metadata type:** DATA ELEMENT

**Definition:** The total number of births resulting from this pregnancy.

**Context:** Multiple pregnancy increases the risk of complications during pregnancy, labour and birth and is associated with higher risk of perinatal morbidity and mortality.

**Data type:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:**
- 0 *Singleton* – Only one baby born
- 1 *Twins* – Two babies
- 2 *Triplets* – Three babies
- 3 *Quads* – Four babies
- 4 *Quintuplets* – Five babies
- 5 *Sextuplets* – Six babies
- 6 *Other*
- 99 *Not stated*

**Guide for use:** Plurality of a pregnancy is determined by the number of live births or by the number of fetuses that remain in-utero at 20 weeks’ gestation and that are subsequently born separately. In multiple pregnancies or, if gestational age is unknown, only live births of any birth weight or gestational age, or fetuses weighing 400 g or more are taken into account in determining plurality.

Fetuses aborted before 20 completed weeks or fetuses compressed in the placenta at 20 or more weeks are excluded.

**Verification rules:** Is qualified by “Birth order” version 2.

**Related metadata:** Supersedes “Birth plurality” version 1 – 01/01/1994.

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection
BIRTH ORDER

**ANZNN label:** ‘BrthOrd’

**Admin status:** CURRENT 01/07/1996

**Version number:** 2

**Metadata type:** DATA ELEMENT

**Definition:** The order of each baby of a multiple birth.

**Context:** Perinatal: required to analyse pregnancy outcome according to birth order and identify the individual baby resulting from a multiple birth pregnancy. Multiple births have higher risks of perinatal mortality and morbidity. Multiple birth pregnancies are often associated with obstetric complications, labour and delivery complications, higher rates of neonatal morbidity, low birth weight and a higher perinatal death rate.

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:** A single digit numeric field representing the birth order.

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Singleton</td>
</tr>
<tr>
<td>1</td>
<td>First of a multiple birth</td>
</tr>
<tr>
<td>2</td>
<td>Second of a multiple birth</td>
</tr>
<tr>
<td>3</td>
<td>Third of a multiple birth</td>
</tr>
<tr>
<td>4</td>
<td>Fourth of a multiple birth</td>
</tr>
<tr>
<td>5</td>
<td>Fifth of a multiple birth</td>
</tr>
<tr>
<td>6</td>
<td>Sixth of a multiple birth</td>
</tr>
<tr>
<td>7</td>
<td>Other</td>
</tr>
<tr>
<td>99</td>
<td>Not stated</td>
</tr>
</tbody>
</table>

**Verification rules:** Is qualified by “Birth plurality” version 2

**Related metadata:** Supersedes “Birth order” version 1 − 01/01/1994.

**Source organisation:** National Perinatal Data Development Committee. **National minimum data set:** Perinatal
ESTABLISHMENT NUMBER

**ANZNN label:** ‘BabyCODE’

**Admin status:** CURRENT 01/01/2016

**Version number:** 5

**Metadata type:** DATA ELEMENT

**Definition:** A unique code which identifies an individual baby, allocated at source hospital and provided to ANZNN.

**Context:** High-risk babies admitted for intensive care.

**Datatype:** Character

**Field size:** *Min.* 5 *Max.* 14

**Format:** CCCCCCCCCCC

**Data domain:** Valid establishment code.

**Related metadata:** Supersedes “Establishment number” version 2 – 01/01/1997

Supersedes “Establishment number” version 3 – 01/07/2007

Supersedes “Establishment number” version 4 – 01/07/2011

**Source organisation:** National Health Data Committee. National Minimum data set: Perinatal

**Comments:** This data element supports the provision of unit record and / or summary data by State and Territory health authorities as part of the Emergency Department Waiting Time National Minimum Data Set.
DATE OF BIRTH

ANZNN label: ‘DOB’

Admin status: CURRENT 01/01/1997
Version number: 4
Metadata type: DATA ELEMENT

Definition: Date of birth of the person.
Context: Required to derive age for demographic analyses, for analysis by age at a point of time and for use to derive Diagnosis Related Group (admitted patients). This also assists in the unique identification of babies as ANZNN has de-identified data, and required for the derivation of other data elements.

Data type: Numeric
Field size: Min. 10 Max. 10
Format: DD/MM/YYYY

Data domain: Valid date

Guide for use: If the date of birth is not known provision should be made to collect age (in years) and a date of birth derived from age.

Verification rules: For the provision of State and Territory hospital data to Commonwealth agencies this field must:
- Be ≤ Admission date, otherwise resulting in fatal error
- Not be null
- Be consistent with diagnoses and procedure codes, for records to be grouped, otherwise resulting in fatal error.

Is qualified by “Time of birth”


TIME OF BIRTH

**ANZNN label:** ‘DOBTime’

**Admin status:** CURRENT 01/01/2006

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:**
Time of birth of the person.

**Context:**
Required to derive age for demographic analyses, for analysis by age at a point of time and use to derive Diagnosis Related Group (admitted patients).

Diurnal variations in hospital death rates are well documented in the neonatal literature by using birth registration data and more recently, with risk-adjusted admission data. Most of these studies have only compared mortality between night and day, regardless of public holidays and weekends, which are times presumably similar to night hours in terms of staffing and access to diagnostic and therapeutic services including obstetrics, anaesthesiology and radiology. Any circadian variation in mortality or morbidity has important implications for the organization and delivery of care services because millions of births take place after office hours throughout the world. Reasons for this variation are widely perceived to be due to lower levels and expertise of staffing including support personnel and reduced access to diagnostic and therapeutic services after working hours. Other reasons may include errors of judgment related to physical and mental fatigue from night shifts and overwork.

**Data type:** Numeric

**Field size:** Min. 5 Max. 5

**Format:** hh:mm (24 hour clock)

**Data domain:** Valid time

**Guide for use:** Should be before Time of admission

**Verification rules:**
For the provision of State and Territory hospital data to Commonwealth agencies this field must:
- Be ≤ Admission date, otherwise resulting in fatal error
- Not be null
- Be consistent with other data, for records to be grouped

Is qualified by “Date of birth”

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection
ADMISSION DATE

**ANZNN label:** ‘DOA’

**Admin status:** CURRENT 01/01/1997

**Version number:** 4

**Metadata type:** DATA ELEMENT

**Definition:** The date on which the baby was admitted to the tertiary hospital responsible for documentation of care.

**Context:** Required to identify period in which the admitted patient episode and hospital stay occurred and for derivation of length of stay.

**Data type:** Numeric

**Field size:** Min. 10 Max. 10

**Format:** DD/MM/YYYY

**Data domain:** Valid date

**Verification rules:** Right justified and zero filled.

- Admission date \( \leq \) separation date.
- Admission date \( \geq \) date of birth.
- Is qualified by “Time of admission”

**Related metadata:** Supersedes “Date of admission” version 3 – 01/01/1994

**Source organisation:** National Health Data Committee.

**Comment:** Also used to date the length of treatments. This admission date refers to the first admission to a registration hospital.
TIME OF ADMISSION

**ANZNN label:** ‘DOATime’

**Admin status:** CURRENT 01/01/2006  
**Version number:** 1  
**Metadata type:** DATA ELEMENT

**Definition:** The time on which the baby was admitted to the tertiary hospital responsible for documentation of care.

**Context:** Required to identify the time of commencement of the episode or hospital stay, and for derivation of length of stay.

Diurnal variations in hospital death rates are well documented in the neonatal literature by using birth registration data and more recently, with risk-adjusted admission data. Most of these studies have only compared mortality between night and day, regardless of public holidays and weekends, which are times presumably similar to night hours in terms of staffing and access to diagnostic and therapeutic services including obstetrics, anaesthesiology and radiology. Any circadian variation in mortality or morbidity has important implications for the organization and delivery of care services because millions of births take place after office hours throughout the world. Reasons for this variation are widely perceived to be due to lower levels and expertise of staffing including support personnel and reduced access to diagnostic and therapeutic services after working hours. Other reasons may include errors of judgment related to physical and mental fatigue from night shifts and overwork.

**Data type:** Numeric  
**Field size:** Min. 5 Max. 5  
**Format:** hh:mm (24 hour clock)

**Data domain:** Expressed as hours and minutes using 24 hour clock

**Verification rules:** Should be > Time of birth.  
Is qualified by Time of birth

**Related metadata:** Used in conjunction with “Admission date”

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection

**Comment:** Also used to find the length of treatments. This admission time refers to the first admission to the registration hospital.
SEX

ANZNN label: ‘SEX’

Admin status: CURRENT 01/01/1999
Version number: 3
Metadata type: DATA ELEMENT

Definition: The sex of the person.
Context: Required for analyses of service utilisation, needs for services and epidemiological studies.
Data type: Numeric
Field size: Min. 1 Max. 1
Format: N

Data domain: 0 Unknown – Information not available
1 Male
2 Female
3 Ambiguous – or indeterminate

Guide for use: An indeterminate sex category may be necessary for situations such as the classification of perinatal statistics when it is not possible for the sex to be determined.

Related metadata: Supersedes “Sex” version 2 – 01/01/1994

Source organisation: National Health Data Committee. National Minimum data sets: Perinatal
INFANT BIRTHWEIGHT - NEONATE

**ANZNN label:** ‘Wght’

**Admin status:** CURRENT 01/01/1998

**Version number:** 3

**Metadata type:** DATA ELEMENT

**Definition:** The first weight of the live born or stillborn baby obtained after birth

**Context:** Birth weight is an important indicator of pregnancy outcome, is major risk factor for neonatal morbidity and mortality and is required to analyse perinatal services for high-risk infants.

**Data type:** Numeric

**Field size:** Min. 3 Max. 4

**Format:** NNNN

**Data domain:** 3 - 4 digit field representing the birthweight in grams

**Guide for use:** For live births, birth weight should preferably be measured within the first hour of life before significant postnatal weight loss has occurred. While statistical tabulations include 500g groupings for birth weight, weights should not be recorded in those groupings. The actual weight should be recorded to the degree of accuracy to which it is measured.

**Verification rules:** For provision of State and Territory hospital data to Commonwealth agencies this field must be consistent with diagnoses and procedure codes for valid grouping.

**Related metadata:** Used in derivation of Diagnosis related group, version 1.

Supersedes “Birth weight” version 2 – 01/01/1994

**Source organisation:** National Perinatal Data Development Committee. National Minimum data sets: Perinatal
GESTATIONAL AGE IN WEEKS

**ANZNN label:** ‘Gest’

**Admin status:** CURRENT 01/07/1996

**Version number:** 2

**Metadata type:** DATA ELEMENT

**Definition:** The estimated gestation of the baby at birth in completed weeks.

**Context:** The first day of the last menstrual period (LMP) is required to estimate gestational age, which is a key outcome of pregnancy and an important risk factor for neonatal outcomes. Although the date of the LMP may not be known, or may sometimes be erroneous, estimation of gestational age based on antenatal ultrasound and post birth clinical assessment also has limitations.

**Data type:** Numeric

**Field size:** Min. 2 Max. 2

**Format:** NN

**Data domain:** Number representing the number of completed weeks, or 99 for not stated or unknown.

**Guide for use:** This is derived from clinical assessment when accurate information on the date of the last menstrual period (LMP) is not available for this pregnancy. If dates are certain these should be accepted as defining gestational age at birth.

Antenatal ultrasound is extremely accurate at 8-10 weeks gestation (+/- 3 days), but at 18-20 weeks it is about as accurate as post birth clinical assessment (+/- 2 weeks). A decision should be based on the information that is most likely to be accurate. Late ultrasound and post birth clinical assessment should generally be reserved for situations where either the dates are uncertain or there is no early antenatal ultrasound (< 12 weeks).

**Related metadata:** Relates to “Gestational age”. This is calculated using the first day of the last menstrual period.

**Source document:** International Classification of Diseases and Related Health Problems, 10th Revision, WHO, 1992.

**Source organisation:** National Perinatal Data Development Committee. National Minimum data sets: Perinatal
### GESTATIONAL AGE IN DAYS

**ANZNN label:** ‘Gestdays’

**Admin status:** CURRENT 01/01/2011

**Version number:** 3

**Metadata type:** DATA ELEMENT

**Definition:** The number of days of the non-completed week.

**Context:** The first day of the last menstrual period (LMP) is required to estimate gestational age, which is a key outcome of pregnancy and an important risk factor for neonatal outcomes.

At the borderline of viability expressing gestation in weeks plus days provides an enhanced level of accuracy. Whilst this is almost certainly fallacious for the individual baby it is valid for collection of population data.

**Data type:** Numeric

**Field size:** Min. 2 Max. 2

**Format:** NN

**Data domain:** Number representing the number of completed days

If value is missing or unknown use 99

**Guide for use:** This is derived from clinical assessment when accurate information on the date of the last menstrual period (LMP) is not available for this pregnancy. If dates are certain these should be accepted as defining gestational age at birth.

Antenatal ultrasound is extremely accurate at 8-10 weeks gestation (+/- 3 days), but at 18-20 weeks it is about as accurate as post birth clinical assessment (+/- 2 weeks). A decision should be based on the information that is most likely to be accurate. Late ultrasound and post birth clinical assessment should generally be reserved for situations where either the dates are uncertain or there is no early antenatal ultrasound (< 12 weeks). Estimates of gestation based on late ultrasound (18-20 wks) or post birth clinical assessment are not sufficiently accurate for this purpose and such gestations should generally be expressed as completed weeks only.

**Related metadata:** Relates to “Gestational age”. This is calculated using the first day of the last menstrual period.

**Source document:** International Classification of Diseases and Related Health Problems, 10th Revision, WHO, 1992.

**Source organisation:** National Perinatal Data Development Committee. National Minimum data sets: Perinatal
PLACE OF BIRTH

ANZNN label: ‘PIBrth’

Admin status: CURRENT  01/01/1994
Version number: 1
Metadata type: DATA ELEMENT

Definition: The actual place where the birth occurred

Context: High-risk babies admitted for intensive care. Used to analyse risk factors and perinatal outcomes by place of birth. While most deliveries occur within hospitals, an increasing number of births now occur in other settings.

Data type: Numeric

Field size: Min. 1 Max. 1
Format: N

Data domain: 0 Unknown – Information not available
1 Non tertiary hospital – Born in a hospital without a level III neonatal intensive care nursery.
2 Tertiary hospital – Born in a hospital with a level III neonatal intensive care nursery.
3 Home birth – Birth planned for and occurred at home.
4 Born before arrival – Born at home (unplanned event), or in an ambulance, or any other area outside a hospital with obstetric facilities.

Source organisation: ANZNN Advisory Committee, derived from NSW Neonatal Intensive Care Units Data Collection
HOSPITAL OF BIRTH

**ANZNN label:** ‘PBTH’

**Admin status:** CURRENT 01/01/1994

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Name of the Hospital of baby’s birth

**Context:** High-risk babies admitted for intensive care

**Data type:** Character

**Field size:** Min. 8 Max. 8

**Format:** CCCCCCCC

**Data Domain:** Characters representing the registration hospital code or the name.

**Guide for use:** Initially, the hospital of birth is nominated to allow tracking and merging of baby’s data. When the registration unit’s data is complete, only the codes for participating hospitals remain.

If the baby is Born at home (unplanned event), or in an ambulance, or any other area outside a hospital with obstetric facilities, then the first hospital of admission should be used.

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
PRESENTATION AT BIRTH

**ANZNN label:** 'Present_n'

**Admin status:** CURRENT 01/01/1997

**Version number:** 2

**Metadata type:** DATA ELEMENT

**Definition:** Presenting part of the fetus (at lower segment of the uterus) at birth.

**Context:** Presentation types other than vertex are associated with higher rates of caesarean section, instrumental delivery, perinatal mortality and neonatal morbidity.

**Data type:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:**

0  **Unknown** – information not available
1  **Cephalic** – including face and brow
2  **Breech**
3  **Other** – includes transverse lie

**Related metadata:** Used in conjunction with "Method of birth"

Supersedes "Presentation at birth" version 1 – 01/01/1994

**Source document:** Adapted from National Health Data Dictionary

**Source organisation:** ANZNN Advisory Committee.
**METHOD OF BIRTH**

**ANZNN label:** ‘Delivery’

**Admin status:** CURRENT  01/01/2006

**Version number:** 2

**Metadata type:** DATA ELEMENT

**Definition:** The method of complete expulsion or extraction from its mother of a product of conception.

**Context:** High-risk babies admitted for intensive care: The method of birth may affect the health status of the mother and the baby at birth and during the postpartum period.

**Data type:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Unknown – Information not available</td>
</tr>
<tr>
<td>1</td>
<td>Vaginal – Vaginal birth, includes vaginal breech</td>
</tr>
<tr>
<td>2</td>
<td>Instrument – Vaginal birth using instrument. Includes forceps, rotations, and vacuum extractions</td>
</tr>
<tr>
<td>3</td>
<td>Caesarean section in labour – Caesarean performed after the commencement of labour (regular painful contractions, leading to progressive effacement and dilatation of cervix, eventually leading to the birth of the baby)</td>
</tr>
<tr>
<td>4</td>
<td>Caesarean section, no labour – Caesarean section performed prior to labour commencing</td>
</tr>
</tbody>
</table>


“Emergency Caesarean Section” and “Elective Caesarean Section” should not be used for this data item because those words are misleading. Eg. A mother could have an emergency CS for APH when she is not in labour.

**Related metadata:** Used in conjunction with “Presentation at birth”

Supersedes “Method of birth” version 1 – 01/01/1994

**Source document:** Adapted from National Health Data Dictionary

**Source organisation:** ANZNN Advisory Committee.
LATE CORD CLAMPING

**ANZNN label:** ‘LateCordClamp’

**Admin status:** CURRENT 01/01/2018

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Cord clamping delayed for any amount of time after birth.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**

0  No, cord clamping was not delayed after birth
-1  Yes, cord clamping was delayed after birth
99  Unknown

**Guide for use:**

This item is for babies born at less than 32 weeks' gestation or with birth weight < 1500 grams only. If not applicable, then answer "Unknown (99)".

Collection of this data item is for monitoring the trend of practice.

A delay of at least 30 seconds after birth is typical for late cord clamping. Item does not differentiate for different approaches to cord clamping, eg. before or after breathing was initiated.

**Source organisation:** ANZNN Advisory Council
# CORD MILKING

**ANZNN label:** 'CordMilking'

**Admin status:** CURRENT 01/01/2018

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Cord milking consists of encircling the cord with thumb and forefingers, gentle squeezing, and slowly pushing the blood through the cord to the infant’s abdomen.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No, cord milking was not performed</td>
</tr>
<tr>
<td>-1</td>
<td>Yes, cord milking was performed</td>
</tr>
<tr>
<td>99</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

**Guide for use:** This item is for babies born at less than 32 weeks’ gestation or with birth weight < 1500 grams only. If not applicable, then answer "Unknown (99)".

Collection of this data item is for monitoring the trend of practice. Item does not differentiate for different approaches to cord milking, eg. with or without occluding the maternal site of the umbilical cord whilst cord milking.

**Source organisation:** ANZNN Advisory Council
**APGAR SCORE AT 1 MINUTE**

*ANZNN label:* ‘Apg1’

*Admin status:* CURRENT 01/01/1998  
*Version number:* 2  
*Metadata type:* DATA ELEMENT

*Definition:* Numerical score to evaluate the baby’s condition at 1 minute after birth.

*Context:* Required to analyse pregnancy outcome, particularly after complications of pregnancy, labour and birth. The Apgar score is an indicator of the health of a baby.

*Data type:* Numeric  
*Field size:* Min. 1 Max. 2  
*Format:* NN

*Data domain:* Apgar score (0 – 10)  
*Guide for use:* The score is based on the five characteristics of heart rate, respiratory condition, muscle tone, reflexes and colour. The maximum or best score is 10.

*Verification rules:* Is a qualifier for Status of the baby

*Related metadata:* Supersedes “Apgar score” version 1 – 01/01/1997

*Source organisation:* National Perinatal Data Development Committee.
# APGAR SCORE AT 5 MINUTES

**ANZNN label:** ‘Apg5’

**Admin status:** CURRENT 01/01/1998

**Version number:** 2

**Metadata type:** DATA ELEMENT

**Definition:** Numerical score to evaluate the baby’s condition at 5 minutes after birth.

**Context:** Required to analyse pregnancy outcome, particularly after complications of pregnancy, labour and birth. The Apgar score is an indicator of the health of a baby.

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:** Apgar score (0 – 10)

If value is missing or unknown use 99

**Guide for use:** The score is based on the five characteristics of heart rate, respiratory condition, muscle tone, reflexes and colour. The maximum or best score is 10.

**Verification rules:** Is a qualifier for Status of the baby

**Related metadata:** Supersedes “Apgar score” version 1 – 01/01/1997

**Source organisation:** National Perinatal Data development Committee.
INTUBATED AT RESUSCITATION

**ANZNN label:** ‘Intubated’

**Admin status:** CURRENT 01/01/1994

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** An active measure taken shortly after birth and while in labour ward to establish independent respiration and heart rate or to treat depressed respiratory effort by endotracheal intubation.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**

- **0** No, intubation not necessary in labour ward
- **-1** Yes, intubation necessary in labour ward
- **99** Unknown

**Guide for use:** This does not include intubation for tracheal aspiration or intubation for ongoing respiratory care either in the labour ward or in the neonatal intensive care unit after resuscitation has been completed.

**Source organisation:** ANZNN Advisory Committee; derived from NSW Neonatal Intensive Care Units Data Collection.
**PRESENCE OF CONGENITAL ANOMALY**

**ANZNN label:** ‘Anom’

**Admin status:** CURRENT 01/01/1994

**Version number:** 2

**Metadata type:** DATA ELEMENT

**Definition:** Structural abnormalities (including deformations) that are present at birth and diagnosed prior to separation from care (discharge to home).

**Context:** Admitted patient care: required to monitor trends in the reported incidence of congenital anomalies, to detect new drug and environmental teratogens to analyse possible causes in epidemiological studies, and to determine survival rates and the utilisation of paediatric services.

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**

- **0** No, congenital anomaly not found
- **-1** Yes, congenital anomaly found
- **99** Unknown

**Related metadata:** Used in conjunction with "Congenital anomalies, specify".

Name change from ‘malformation’ to ‘anomaly’ from 01/01/2012.

**Source document:** International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification, 2nd edition (July 2000)

National Centre for Classification of Health

**Source organisation:** National Perinatal Data Advisory Committee
CONGENITAL ANOMALIES, SPECIFY


**Admin status:** CURRENT 01/01/1999

**Version number:** 3

**Metadata type:** DATA ELEMENT

**Definition:** Structural abnormalities (including deformations) that are present at birth and diagnosed prior to separation from care (discharge to home).

**Context:** Admitted patient care: required to monitor trends in the reported incidence of congenital anomalies, to detect new drug and environmental teratogens, to analyse possible causes in epidemiological studies, and to determine survival rates and the utilisation of paediatric services.

**Data type:** Alphanumeric

**Field size:** Min. 3 Max. 7

**Format:** NNN.NN

**Data domain:** ICD-10-AM

**Guide for use:** Coding to the disease classification of ICD-10-AM (2nd edition) is the preferred method of coding admitted patients. Multiple congenital anomalies should be recorded in a separate table where possible as outlined below.

<table>
<thead>
<tr>
<th>BabyCODE</th>
<th>AnomCode (ICD-10 code)</th>
<th>Anomdesc</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Used in conjunction with "Presence of congenital malformations".

Name change from ‘malformation’ to ‘anomaly’ from 01/01/2012.

**Source document:** International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification, 2nd edition (July 2000) National Centre for Classification of Health

**Source organisation:** National Perinatal Data Advisory Committee
TEMPERATURE ON ADMISSION

**ANZNN label:** ‘Temp’

**Admin status:** CURRENT 01/01/1994

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Temperature on admission to neonatal intensive care unit or soonest to admission to registration unit. Use rectal temperature or, if not available, temperature per axillae.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 2 Max. 4

**Format:** NN.N

**Data domain:** Number representing temperature measured in degrees Celsius, correct to one decimal place.

If value is missing or unknown use 0.0

**Guide for use:** If the baby is transported from a peripheral area by a specialist neonatal retrieval team, admission (for the purpose of this audit) is considered to commence when the specialist retrieval team arrives at the baby’s bedside.

If the baby is more than twelve hours old at admission to the registration unit or when the specialist neonatal team arrives (whichever is earlier), use “0.0” to denote ‘missing data’. If an admission temperature is not recorded, also use “0.0”.

CORD LACTATE

**ANZNN label:** ‘CordLactate’

**Admin status:** CURRENT 01/01/2016  
**Version number:** 1  
**Metadata type:** DATA ELEMENT

**Definition:** Cord lactate measurement (mmol/L) should be taken from cord arterial blood in preference over cord venous blood.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric  
**Field size:** Min. 2 Max. 4  
**Format:** NN.N

**Data domain:** Number representing the earliest lactate in mmol per litre correct to one decimal place.  
If value is missing or unknown use 99

**Source organisation:** ANZNN Advisory Council.
FIRST LACTATE

ANZNN label: ‘FirstLactate'

Admin status: CURRENT 01/01/2016
Version number: 1
Metadata type: DATA ELEMENT

Definition: Lactate measurement (mmol/L) should be taken from the first blood gas within the first 12 hours of life.

Context: High-risk babies admitted for intensive care.

Data type: Numeric
Field size: Min. 2 Max. 4
Format: NN.N

Data domain: Number representing the earliest lactate in mmol per litre correct to one decimal place.
If value is missing or unknown use 99

Source organisation: ANZNN Advisory Council.
DATE OF FIRST LACTATE

ANZNN label: ‘FirstLactateDate’

Admin status: CURRENT  01/01/2016
Version number: 1
Metadata type: DATA ELEMENT

Definition: Date of lactate measurement from the first blood gas within the first 12 hours of life.

Context: High-risk babies admitted for intensive care.

Data type: Numeric
Field size: Min. 10 Max. 10
Format: DD/MM/YYYY

Data domain: Valid date

Verification rules: Should be ≥ Date of birth.
Related metadata: Used in conjunction with “First lactate” and “Time of first lactate”
Source organisation: ANZNN Advisory Council.
# TIME OF FIRST LACTATE

<table>
<thead>
<tr>
<th><strong>ANZNN label:</strong></th>
<th>‘FirstLactateTime’</th>
</tr>
</thead>
</table>

| **Admin status:** | CURRENT 01/01/2016 |
| **Version number:** | 1 |
| **Metadata type:** | DATA ELEMENT |

**Definition:** Time of lactate measurement from the first blood gas within the first 12 hours of life.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 5 Max. 5

**Format:** hh:mm (24 hour clock)

**Data domain:** Valid time

**Verification rules:** Should be ≥ Date and Time of birth.

**Related metadata:** Used in conjunction with “First lactate” and “Date of first lactate”

**Source organisation:** ANZNN Advisory Council.
WORST BASE EXCESS

ANZNN label: ‘Worst_BE’

Admin status: CURRENT 01/01/1994
Version number: 1
Metadata type: DATA ELEMENT

Definition: Worst base deficit (mml/l) recorded between admission to neonatal intensive care and 12 hours after birth.

Context: High-risk babies admitted for intensive care

Data type: Numeric
Field size: Min. 2 Max. 4
Format: NN.N

Data domain: Number representing the worst base excess in mmol per litre correct to one decimal place. May have negative values.
If value is missing or unknown use 99.

Guide for use: If the baby is transported from a peripheral area by a specialist neonatal retrieval team, admission (for the purpose of this audit) is considered to commence when the specialist retrieval team arrives at the baby’s bedside.
If the baby is more than twelve hours old at admission to the registration unit or when the specialist neonatal team arrives (whichever is earlier), use “99” to denote ‘missing data’.
If no base excess is recorded, and the baby was well and in less than 40% oxygen during the first 12 hours, then record “0.0” for normal base excess.
If no base excess is recorded, and the baby was unwell, then record “99” for missing.

<table>
<thead>
<tr>
<th>Worst base excess</th>
<th>≥ -7.0</th>
<th>-7.1 to -10.0</th>
<th>-10.1 to -15.0</th>
<th>≤ -15.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRIB score</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Related metadata: Variable name has changed from ‘Worst BE’ to Worst_BE’ from 01/01/2012.


Comment: This data is used for the calculation of the Critical Risk Index for Babies (CRIB) score.
**MAIN RESPIRATORY DIAGNOSIS**

**ANZNN label:** ‘Resp’

**Admin status:** CURRENT 01/01/2011

**Version number:** 4

**Metadata type:** DATA ELEMENT

**Definition:** Main indication for respiratory support for the baby.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**

0 **Unknown** – Information not available

1 **Normal** – No respiratory disease noted; no respiratory support given

2 **Non-specific** – Any non-specific respiratory distress in term or preterm babies requiring support (includes superseded categories of Transient tachypnoea of the newborn [02], Immature lung [07]) and aspiration of amniotic fluid or blood.

3 **Hyaline membrane disease** – Increasing respiratory distress or oxygen requirements, or need for ventilator support from the first six hours of life with a chest x-ray showing generalised reticulo-granular pattern, with or without air bronchogram. This is normally a five day illness and babies who are treated with surfactant who have no respiratory illness beyond 24 hours of age probably did not have HMD in the first place and should be coded as having non specific respiratory distress.

4 **Meconium aspiration** – Respiratory distress presenting from immediately after birth to twelve hours of age. Hypoxia, tachypnoea, gasping respirations, and often signs of underlying asphyxia. Chest x-ray shows over-expansion of lungs with widespread coarse, fluffy infiltrates. Infants who require respiratory support for < less than 24 hours should not be coded as MAS. They should be coded as non specific respiratory disease.

5 **Pneumonia** – Respiratory distress with proven or suspected infection (toxic blood count), and chest x-ray showing persisting opacities.

6 **Persistent primary pulmonary hypertension (without co-existing lung disease)** – Echo cardiac (shunting) or clinical evidence, oxygen requirement unexplained by chest x-ray or loud P2, or differential pre and post-ductal TCPO2.

7 (Superseded)

8 **Apnoea** – Recurrent pauses in breathing of more than 20 seconds, or for less than 20 seconds and associated with bradycardia (heart rate < 100) or desaturation requiring intervention.

9 **Congenital malformation** – Congenital malformation was the primary reason for respiratory distress, e.g. diaphragmatic hernia - must also be listed under congenital anomaly field.
10 **Other** – Unspecified other respiratory disease.

11 **Peri-surgical** – Indication for respiratory support is surgical intervention. Must also be listed under Neonatal surgery field.

12 **Newborn encephalopathy / Hypoxic ischaemic encephalopathy** – A clinically defined syndrome of disturbed neurological function in an baby with difficulties in initiating and maintaining respiration, depression of tone and reflexes, subnormal level of consciousness and often with seizures. Birth asphyxia should be included here. Metabolic Encephalopathy +/- seizures due to metabolic disturbance such as hypoglycaemia, hyponatraemia, hypernatraemia, hypocalcaemia or CNS infection (meningitis or encephalitis) should not be included it should be coded as ‘10’.

**Guide for use:** For a diagnosis other than 'normal' the baby must have received some form of respiratory support (supplemental oxygen therapy and / or assisted ventilation for four or more consecutive hours, or died prior to four hours).

If more than one diagnosis is possible, use the respiratory condition that was most serious. For example, severe hyaline membrane disease (HMD) requiring surfactant replacement and mechanical ventilation plus later apnoea requiring continuous positive airways pressure would be coded as '3'. However, diaphragmatic hernia with mild HMD would be coded as '9'. Asphyxiated babies in receipt of respiratory support because of their encephalopathy should be coded as ‘12’, unless they have a significant respiratory illness such as MAS.

**Related metadata:** Supersedes “Main respiratory diagnosis” versions 1 – 01/01/1994

Supersedes “Main respiratory diagnosis” versions 2 – 02/04/1995

Supersedes “Main respiratory diagnosis” versions 3 – 01/01/1998


**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
# EXOGENOUS SURFACTANT

**ANZNN label:** ‘Surfactant’ 

**Admin status:** CURRENT 01/01/2017 

**Version number:** 1 

**Metadata type:** DATA ELEMENT 

**Definition:** A dose of any type of exogenous surfactant was used to treat this baby. 

**Context:** High-risk babies admitted for intensive care 

**Data type:** Numeric 

**Field size:** Min. 1 Max. 2 

**Format:** NN 

**Data domain:** 
- 0 No exogenous surfactant given to this baby 
- -1 Yes, exogenous surfactant given to this baby 
- 99 Unknown 

**Guide for use:** Includes incomplete administration. 

**Related metadata:** Supersedes “Exogenous surfactant” version 3 – 01/01/2006 

**Source organisation:** ANZNN Advisory Council.
METHOD OF ADMINISTRATION OF FIRST DOSE OF SURFACTANT

**ANZNN label:** ‘SurfMethod’

**Admin status:** CURRENT 01/01/2017

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Method used to administer the first dose of surfactant.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:**
- 0 Unknown
- 1 Endotracheal tube
- 2 Catheter (eg. MIST)
- 3 Other – eg. laryngeal mask, aerosolisation

**Related metadata:** Used in conjunction with “Surfactant”, “Date surfactant first given” and “Time surfactant first given”

**Source organisation:** ANZNN Advisory Council
# DATE SURFACTANT FIRST GIVEN

<table>
<thead>
<tr>
<th><strong>ANZNN label:</strong></th>
<th>‘Surfdate’</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Admin status:</strong></td>
<td>CURRENT 01/01/2017</td>
</tr>
<tr>
<td><strong>Version number:</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Metadata type:</strong></td>
<td>DATA ELEMENT</td>
</tr>
</tbody>
</table>

**Definition:** The date of any type of exogenous surfactant given via any method to treat this baby.

**Context:** Required to identify the date of commencement of the treatment.

**Data type:** Numeric

**Field size:** Min. 10 Max. 10

**Format:** DD/MM/YYYY

**Data domain:** Valid date

**Guide for use:** Infants who receive surfactant and do not satisfy the ANZNN registration criteria (birth weight or gestation criteria or managed without either mechanical ventilation by ETT or nasal CPAP for 4 hours or more) should not be included in the dataset.

**Verification rules:** Should be ≥ date of birth.

**Related metadata:** Supersedes “Date surfactant first given” version 1 – 01/01/2006

**Source organisation:** ANZNN Advisory Council.
## TIME SURFACTANT FIRST GIVEN

<table>
<thead>
<tr>
<th><strong>ANZNN label:</strong></th>
<th>‘SurfTime’</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Admin status:</strong></td>
<td>CURRENT 01/01/2017</td>
</tr>
<tr>
<td><strong>Version number:</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Metadata type:</strong></td>
<td>DATA ELEMENT</td>
</tr>
<tr>
<td><strong>Definition:</strong></td>
<td>The time of any type of exogenous surfactant given via any method to treat this baby.</td>
</tr>
<tr>
<td><strong>Context:</strong></td>
<td>Administration of surfactant is most effective if given within the first 8 hours of life.</td>
</tr>
<tr>
<td><strong>Data type:</strong></td>
<td>Numeric</td>
</tr>
<tr>
<td><strong>Field size:</strong></td>
<td>Min. 5 Max. 5</td>
</tr>
<tr>
<td><strong>Format:</strong></td>
<td>hh:mm (24 hour clock)</td>
</tr>
<tr>
<td><strong>Data domain:</strong></td>
<td>Valid time</td>
</tr>
<tr>
<td><strong>Guide for use:</strong></td>
<td>Infants who receive surfactant but do not satisfy the ANZNN registration criteria (birth weight or gestation criteria or managed without either mechanical ventilation by ETT or nasal CPAP for 4 hours or more) should not be included in the dataset.</td>
</tr>
<tr>
<td><strong>Verification rules:</strong></td>
<td>Should be &gt; time of birth.</td>
</tr>
<tr>
<td><strong>Related metadata:</strong></td>
<td>Used in conjunction with “Date of first surfactant given”.</td>
</tr>
<tr>
<td><strong>Related metadata:</strong></td>
<td>Supersedes “Time surfactant first given” version 1 – 01/01/2006</td>
</tr>
<tr>
<td><strong>Source organisation:</strong></td>
<td>ANZNN Advisory Council.</td>
</tr>
</tbody>
</table>
NUMBER OF DOSES OF SURFACTANT

**ANZNN label:** ‘SurfDoses’

**Admin status:** CURRENT 01/01/2017

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Total number of doses of surfactant administered.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:** Expressed as total number of doses.

If value is missing or unknown use 99.

**Related metadata:** Used in conjunction with “Surfactant”, “Date surfactant first given”, “Time surfactant first given” and “Method of administration of first dose of surfactant”

**Source organisation:** ANZNN Advisory Council
EXOGENOUS SURFACTANT (SUPERSEDED)

**ANZNN label:** ‘Surf’

**Admin status:** 01/01/2006 – 31/12/2016

**Version number:** 3

**Metadata type:** DATA ELEMENT

**Definition:** A dose of any type of exogenous surfactant was used to treat this baby.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:**
0 Unknown – Information not available
1 None – No artificial surfactant ever given to this baby.
2 Exosurf – Any treatment using ‘Exosurf’.
3 Survanta – Any treatment using ‘Survanta’.
4 Both – Any combination of surfactant.
5 Other – Use of other surfactant
6 Curosurf - Use of curosurf
7 Curosurf and Survanta

**Guide for use:** Includes incomplete administration.

**Related metadata:**
- Supersedes “Exogenous surfactant” version 1 – 01/01/1994
- Supersedes “Exogenous surfactant” version 2 – 01/06/2005

**Source organisation:** ANZNN Advisory Committee; derived from NSW Neonatal Intensive Care Units Data Collection.
AIR LEAK REQUIRING DRAINAGE

**ANZNN label:** ‘ALLeak’

**Admin status:** CURRENT  01/01/1994

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** The presence of any form of air leak requiring drainage (either transient or continuous drainage).

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** *Min*. 1 *Max*. 2

**Format:** NN

**Data domain:**

- 0  No air leak requiring drainage present
- 1  Yes, air leak requiring drainage present
- 99  Unknown

**Guide for use:** Pulmonary air leaks may include pneumothorax, pulmonary interstitial emphysema, pneumomediastinum, pneumopericardium, pneumoperitoneum, and subcutaneous or surgical emphysema. Exclude prophylactic insertion of chest drain in association with thoracotomy (surgery).

**Related metadata:** Variable name has changed from ‘ALleak’ to ‘ALLeak’ from 01/01/2012.


**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
DATE OF FIRST DRAINAGE OF PULMONARY AIR LEAK

ANZNN label: ‘ALDate’

Admin status: CURRENT 01/01/2007
Version number: 1
Metadata type: DATA ELEMENT

Definition: Date of any form of pulmonary air leak requiring drainage (by needle or drain). Include pneumothorax, pneumomediastinum or pneumopericardium.

Context: High-risk babies admitted for intensive care. Air leak may occur early in association with or as a consequence of resuscitation at birth, or it may occur spontaneously in association with respiratory illness or it may occur in association with mechanical ventilation. Each of these has potentially a different aetiology and time of onset.

Data type: Numeric
Field size: Min. 10 Max. 10
Format: DD/MM/YYYY

Data domain: Valid date

Verification rules: This field must be ≥ Date of birth, be consistent with diagnoses and procedure codes, for records to be grouped.

Guide for use: Air leak managed conservatively with ambient oxygen is not recorded.

Related metadata: Variable name has changed from ‘ALdate’ to ‘ALDate’ from 01/01/2012.

Source organisation: ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
TIME OF FIRST DRAINAGE OF PULMONARY AIR LEAK

**ANZNN label:** ‘ALTime’

**Admin status:** CURRENT 01/01/2007

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** The time of any form of pulmonary air leak requiring drainage (by needle or drain). Include pneumothorax, pneumomediastinum or pneumopericardium.

**Context:** High-risk babies admitted for intensive care. Air leak may occur early in association with or as a consequence of resuscitation at birth, or it may occur spontaneously in association with respiratory illness or it may occur in association with mechanical ventilation. Each of these has potentially a different aetiology and time of onset.

**Data type:** Numeric

**Field size:** Min. 5 Max. 5

**Format:** hh:mm (24 hour clock)

**Data domain:** Valid time

**Guide for use:** Air leak managed conservatively with ambient oxygen is not recorded.

**Verification rules:** This field must be ≥ date of birth, be consistent with diagnoses and procedure codes, for records to be grouped.

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
**NITRIC OXIDE**

**ANZNN label:** ‘NO_’

**Admin status:** CURRENT 01/01/1996

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Nitric Oxide used in any form or dose for respiratory support of the baby.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**

- 0  Nitric oxide therapy never used
- -1 Yes, nitric oxide therapy used
- 99 Unknown

**Verification rules:** Hours of intermittent positive pressure ventilation must be > 0.

**Related metadata:** Variable name has changed from ‘NO?’ to ‘NO_’ from 01/01/2012.

**Source organisation:** ANZNN Advisory Committee.
DATE OF INITIATION OF NITRIC OXIDE

**ANZNN label:** ‘StartNODate’

**Admin status:** CURRENT 01/01/2017

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Date of initiation of nitric oxide therapy in any form or dose for respiratory support of the baby.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 10 Max. 10

**Format:** DD/MM/YYYY

**Data domain:** Valid date

**Verification rules:** Should be $\geq$ Date of birth.

**Related metadata:** Used in conjunction with “Nitric oxide”, “Time of initiation of nitric oxide” and “Hours of nitric oxide”.

**Source organisation:** ANZNN Advisory Council.
TIME OF INITIATION OF NITRIC OXIDE

ANZNN label: ‘StartNOTime’

Admin status: CURRENT 01/01/2017
Version number: 1
Metadata type: DATA ELEMENT

Definition: Time of initiation of nitric oxide therapy in any form or dose for respiratory support of the baby.

Context: High-risk babies admitted for intensive care.

Data type: Numeric
Field size: Min. 5 Max. 5
Format: hh:mm (24 hour clock)

Data domain: Valid time

Verification rules: Is qualified by Time of birth.

Related metadata: Used in conjunction with “Nitric oxide”, “Date of initiation of nitric oxide” and “Hours of nitric oxide”.

Source organisation: ANZNN Advisory Council.
DATE OF FINAL CESSATION OF NITRIC OXIDE

**ANZNN label:** ‘CeaseNODate’

**Admin status:** CURRENT 01/01/2017

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Date of final cessation of nitric oxide therapy in any form or dose for respiratory support of the baby prior to discharge home.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 10 Max. 10

**Format:** DD/MM/YYYY

**Data domain:** Valid date

**Verification rules:** Is qualified by date and time of initiation of nitric oxide.

**Related metadata:** Used in conjunction with “Time of final cessation of nitric oxide” and “Hours of nitric oxide”.

**Source organisation:** ANZNN Advisory Council.
TIME OF FINAL CESSATION OF NITRIC OXIDE

ANZNN label: ‘CeaseNOTime’

Admin status: CURRENT 01/01/2017
Version number: 1
Metadata type: DATA ELEMENT

Definition: Time of final cessation of nitric oxide therapy in any form or dose for respiratory support of the baby prior to discharge home.

Context: High-risk babies admitted for intensive care.

Data type: Numeric
Field size: Min. 5 Max. 5
Format: hh:mm (24 hour clock)

Data domain: Valid time

Verification rules: Is qualified by date and time of initiation of nitric oxide.

Related metadata: Used in conjunction with “Date of final cessation of nitric oxide” and “Hours of nitric oxide”.

Source organisation: ANZNN Advisory Council.
HOURS OF NITRIC OXIDE

**ANZNN label:** ‘NOhrs’

**Admin status:** CURRENT 01/01/2017

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Total number of hours of nitric oxide therapy in any form or dose for respiratory support of the baby.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 1 Max. 4

**Format:** NNNN

**Data domain:** Number representing total hours of nitric oxide therapy.

**Guide for use:** There is no 4 hour rule. However episodes of < 30 minutes are not counted unless the infant dies. If a baby is managed with 30 minutes of nitric oxide this should be recorded, and this is rounded up to 1 hour.

**Related metadata:** Used in conjunction with “Nitric oxide”, “Date of initiation of nitric oxide” and “Time of initiation of nitric oxide”

**Source organisation:** ANZNN Advisory Council.
EXTRACORPOREAL MEMBRANE OXYGENATION (ECMO)

**ANZNN label:** ‘ECMO_

**Admin status:** CURRENT 01/01/1996
**Version number:** 1
**Metadata type:** DATA ELEMENT

**Definition:** An extracorporeal circuit established to divert baby's blood to a membrane lung for oxygenation (ECMO) initiated for the baby.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**
- 0 ECMO never initiated
- 1 Yes, ECMO initiated
- 99 Unknown

**Verification rules:** Hours of intermittent positive pressure ventilation must be > 0.

**Related metadata:** Variable name has changed from ‘ECMO?’ to ‘ECMO_’ from 01/01/2012.


**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
**NASAL CPAP**

**ANZNN label:** ‘CPAP’

**Admin status:** CURRENT 01/01/2013  
**Version number:** 1  
**Metadata type:** DATA ELEMENT

**Definition:** Use of ongoing nasal CPAP. This does not include the use of CPAP for resuscitation or during transport from the delivery room unless the CPAP is continued thereafter in the NICU.  
CPAP provided for less than four hours, for the purpose of immediate peri-operative care should be excluded.

**Context:** Early treatment of RDS could be managed in different ways;  
- Intubation within an hour of birth and administration of surfactant, followed by extubation and Nasal CPAP. Sometimes this approach is followed by later reintubation and commencement of ongoing mechanical ventilation  
- Early nasal CPAP, sometimes associated with late endotracheal intubation for administration of surfactant +/- commencement of ongoing mechanical ventilation  
- Commencement of ongoing mechanical ventilation immediately following resuscitation and intubation, +/- surfactant

**Data type:** Numeric  
**Field size:** Min. 1 Max. 2  
**Format:** NN

**Data domain:**  
0 Nasal CPAP was never initiated  
-1 Yes, Nasal CPAP was used for at least 4 hours  
99 Unknown

**Guide for use:** Is not related to the CPAP given at delivery room only for the resuscitation. The 4 hour rule does not apply. An infant who is placed on CPAP at 30 minutes of age and is subsequently intubated at 2 hours of age should be recorded as having commenced CPAP at 30 minutes.

**Verification rules:** Is qualified by date of commencement of CPAP

**Related metadata:** Used in conjunction with “Hours of CPAP”, “Date of initiation of nasal CPAP” and “Time of initiation of nasal CPAP”

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection
DATE OF INITIATION OF NASAL CPAP

**ANZNN label:** ‘StartCPAPDate’

**Admin status:** CURRENT 01/01/2007

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Date of commencement of ongoing nasal CPAP. This does not include the use of CPAP for resuscitation or during transport from the delivery room unless the CPAP is continued thereafter in the NICU. CPAP provided for less than four hours, for the purpose of immediate peri-operative care should be excluded.

**Context:** Early treatment of RDS could be managed in different ways;

- Intubation within an hour of birth and administration of surfactant, followed by extubation and Nasal CPAP. Sometimes this approach is followed by later reintubation and commencement of ongoing mechanical ventilation
- Early nasal CPAP, sometimes associated with late endotracheal intubation for administration of surfactant +/- commencement of ongoing mechanical ventilation
- Commencement of ongoing mechanical ventilation immediately following resuscitation and intubation, +/- surfactant

**Data type:** Numeric

**Field size:** Min. 10 Max. 10

**Format:** DD/MM/YYYY

**Data domain:** Valid date

**Guide for use:** Is not related to the CPAP given at delivery room only for the resuscitation. The 4 hour rule does not apply. An infant who is placed on CPAP at 30 minutes of age and is subsequently intubated at 2 hours of age should be recorded as having commenced CPAP at 30 minutes.

**Verification rules:** Is qualified by time of commencement of CPAP

**Related metadata:** Used in conjunction with “Hours of CPAP” and “Time of initiation of nasal CPAP”

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection
TIME OF INITIATION OF NASAL CPAP

ANZNN label: ‘StartCPAPTime’

Admin status: CURRENT 01/01/2007
Version number: 1
Metadata type: DATA ELEMENT

Definition: Time of commencement of ongoing nasal CPAP. This does not include the use of CPAP for resuscitation or during transport from the delivery room unless the CPAP is continued thereafter in the NICU. CPAP provided for less than four hours, for the purpose of immediate perioperative care should be excluded.

Context: High-risk babies admitted for intensive care. Approaches to the early treatment of RDS include:

- Intubation within an hour of birth and administration of surfactant, followed by extubation and Nasal CPAP. Sometimes this approach is followed by later reintubation and commencement of ongoing mechanical ventilation.
- Early nasal CPAP, sometimes associated with late endotracheal intubation for administration of surfactant +/- commencement of ongoing mechanical ventilation.
- Commencement of ongoing mechanical ventilation immediately following resuscitation and intubation, +/- surfactant.

Data type: Numeric
Field size: Min. 5 Max. 5
Format: hh:mm (24 hour clock)

Data domain: Valid time

Guide for use: Use 24 hour clock. This is not related to the CPAP given at delivery room only for the resuscitation. The 4 hour rule does not apply. An infant who is placed on CPAP at 30 minutes of age and is subsequently intubated at 2 hours of age should be recorded as having commenced CPAP at 30 minutes of age.

Verification rules: Is qualified by time of birth

Related metadata: Variable name has changed from ‘StartCPAPtime’ to ‘StartCPAPTime’ from 01/01/2012.

Used in conjunction with “Hours of CPAP” and “Date of initiation of nasal CPAP”

Source organisation: ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection
# DATE OF FINAL CESSATION OF NASAL CPAP

**ANZNN label:** ‘CeaseCPAPDate’

**Admin status:** CURRENT 01/01/2007  
**Version number:** 1  
**Metadata type:** DATA ELEMENT

**Definition:** Date of final cessation of nasal CPAP prior to discharge home. CPAP provided for less than four hours, for the purpose of immediate perioperative care should be excluded.

**Context:** High-risk babies admitted for intensive care. CPAP is often provided intermittently and the number of CPAP hours may not adequately document the overall duration of therapy.

**Data type:** Numeric  
**Field size:** Min. 10 Max. 10  
**Format:** DD/MM/YYYY

**Data domain:** Valid date

**Guide for use:** The last date of the final episode of CPAP should be recorded

**Verification rules:** Is qualified by date and time of commencement of CPAP

**Related metadata:** Used in conjunction with “Hours of CPAP” and “Time of final cessation of nasal CPAP”

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection
TIME OF FINAL CESSATION OF NASAL CPAP

**ANZNN label:** ‘CeaseCPAPTime’

**Admin status:** CURRENT 01/01/2007

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Time of final cessation of nasal CPAP prior to discharge home. CPAP provided for less than four hours, for the purpose of immediate perioperative care should be excluded.

**Context:** High-risk babies admitted for intensive care. CPAP is often provided intermittently and the number of CPAP hours may not adequately document the overall duration of therapy.

**Data type:** Numeric

**Field size:** Min. 5 Max. 5

**Format:** hh:mm (24 hour clock)

**Data domain:** Valid time

**Guide for use:** The last time of the final episode of CPAP should be recorded

**Verification rules:** Is qualified by date and time of commencement of CPAP

**Related metadata:** Variable name has changed from ‘CeaseCPAPtime’ to ‘CeaseCPAPTime’ from 01/01/2012.

Used in conjunction with “Hours of CPAP” and “Date of final cessation of nasal CPAP”

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection
HOURS OF CONTINUOUS POSITIVE AIRWAYS PRESSURE

**ANZNN label:** ‘CPAPhrs’

**Admin status:** CURRENT 01/01/2002

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Total number of hours of continuous positive airways pressure (CPAP) via nasal or nasopharyngeal ventilation.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 5 Max. 5

**Format:** NNNNN

**Data domain:** Number representing total hours of continuous positive airways pressure.

**Guide for use:**

The number of hours of any form of continuous positive airways pressure therapy is summed for all instances of this therapy. If continuous positive airways pressure is given intermittently, this counts as 24 hours (per day) of continuous positive airways pressure.

For periods up to 96 hours, use the exact number of hours. The usual rounding up and down will apply, e.g. 1 hour 20 minutes is recorded as one hour, and 1 hour 30 minutes is recorded as 2 hours. For periods of greater than 96 hours, use the closest 24-hour period.

Midnight on the date of the last day of CPAP is taken as cessation of the episode. Recommencement of CPAP after a non CPAP day represents a new episode.

The overall duration of CPAP is calculated by the addition of hours counted in each episode.

For practical use, a converter chart is provided below:

<table>
<thead>
<tr>
<th>Days</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
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<td>120</td>
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<td>168</td>
<td>192</td>
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<td>336</td>
<td>360</td>
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<td>408</td>
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<table>
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<th>22</th>
<th>23</th>
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<td>648</td>
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<td>696</td>
<td>720</td>
<td>744</td>
<td>768</td>
<td>792</td>
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<table>
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<tbody>
<tr>
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<td>888</td>
<td>912</td>
<td>936</td>
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<td>984</td>
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<td>1080</td>
<td>1104</td>
<td>1128</td>
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<td>1172</td>
</tr>
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</table>

Hours of nasal CPAP (nCPAPhrs) + Hours of nasal/non invasive ventilation (NVenthrs) = Hours of continuous positive airways pressure (CPAPhrs).

Source organisation: ANZNN Advisory Committee.
**HOURS OF NASAL CPAP**

*ANZNN label:* ‘nCPAPhrs’

*Admin status:* CURRENT 01/01/2013

*Version number:* 1

*Metadata type:* DATA ELEMENT

*Definition:* Total number of hours of non invasive continuous positive airways pressure (CPAP) ie: via nasal, nasopharyngeal or face mask. Excludes nasopharyngeal or face mask ventilation.

*Context:* High-risk babies admitted for intensive care

*Data type:* Numeric

*Field size:* Min. 5 Max. 5

*Format:* NNNNN

*Data domain:* Number representing total hours of continuous positive airways pressure

*Guide for use:* The number of hours of non invasive continuous positive airways pressure therapy is summed for all instances of this therapy. If continuous positive airways pressure is given intermittently, this counts as 24 hours (per day) of continuous positive airways pressure.

For periods up to 96 hours, use the exact number of hours. The usual rounding up and down will apply, e.g. 1 hour 20 minutes is recorded as one hour, and 1 hour 30 minutes is recorded as 2 hours. For periods of greater than 96 hours, use the closest 24-hour period.

Midnight on the date of the last day of CPAP is taken as cessation of the episode. Recommencement of CPAP after a non CPAP day represents a new episode.

The overall duration of CPAP is calculated by the addition of hours counted in each episode.

*Related metadata:* Used in conjunction with “Hours of continuous positive airways pressure”.

New item in 2013 to distinguish nasal CPAP hours from nasopharyngeal ventilation hours: as collected in the new item “Hours of nasal / non-invasive ventilation”.

Hours of nasal CPAP (nCPAPhrs) + Hours of nasal/non invasive ventilation (NVenthrs) = Hours of continuous positive airways pressure (CPAPhrs).

*Source organisation:* ANZNN Advisory Committee.
HOURS OF NASAL / NON INVASIVE VENTILATION

**ANZNN label:** ‘NVenthrs’

**Admin status:** CURRENT 01/01/2013

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Total number of hours of nasal/non-invasive ventilation ie: via nasal, nasopharyngeal or face mask. This includes all forms of ventilation including high frequency. This excludes nasopharyngeal or face mask CPAP.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 5 Max. 5

**Format:** NNNNN

**Data domain:** Number representing total hours of non-invasive ventilation.

**Guide for use:** The number of hours of non invasive positive pressure ventilation is summed for all instances of this therapy.

The overall duration of nasal ventilation is calculated by the addition of hours counted in each episode.

**Related metadata:** Used in conjunction with “Hours of continuous positive airways pressure”.

New item in 2013 to distinguish nasal CPAP hours from nasal or non-invasive ventilation hours.

Hours of nasal CPAP (nCPAPhrs) + Hours of nasal/non invasive ventilation (NVenthrs) = Hours of continuous positive airways pressure (CPAPhrs).

**Source organisation:** ANZNN Advisory Committee.
**NASAL HIGH FLOW**

**ANZNN label:** ‘HiFlo’

**Admin status:** CURRENT 01/01/2009

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Blended Air and Oxygen mix with a delivery flow > 1 L/min through any High Flow Device with humidification.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**

- 0     Nasal high flow was never initiated
- 1     Yes, Nasal high flow was used for at least 4 hours
- 99    Unknown

**Guide for use:** Device specifically designed to deliver high intranasal flow which has been shown to be associated with some air pressure.

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
MINIMUM NASAL HIGH FLOW

**ANZNN label:** ‘MinHiFlo’

**Admin status:** CURRENT 01/01/2009  
**Version number:** 1  
**Metadata type:** DATA ELEMENT

**Definition:** Minimum flow rate (greater than 1L / min) with air and oxygen mix delivered through a high flow device during the entire treatment period.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric  
**Field size:** Min. 2 Max. 4  
**Format:** NN.N

**Data domain:** Number representing the minimum nasal high flow in litres (L) per minute correct to one decimal place.  
If value is missing or unknown, use 99.

**Guide for use:** Device specifically designed to deliver high intranasal flow which has been shown to be associated with some air pressure.

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
MAXIMUM NASAL HIGH FLOW

ANZNN label: ‘MaxHiFlo’

Admin status: CURRENT 01/01/2009
Version number: 1
Metadata type: DATA ELEMENT

Definition: Maximum flow rate (in L / min) with air and oxygen mix delivered through a high flow device during the entire treatment period.

Context: High-risk babies admitted for intensive care

Data type: Numeric
Field size: Min. 2 Max. 4
Format: NN.N

Data domain: Number representing the maximum nasal high flow in litres (L) per minute correct to one decimal place.
If value is missing or unknown, use 99.

Guide for use: Device specifically designed to deliver high intranasal flow which has been shown to be associated with some air pressure.

Source organisation: ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
# DATE OF INITIATION OF NASAL HIGH FLOW

**ANZNN label:** ‘StartHiFloDate’

**Admin status:** CURRENT  01/01/2009  
**Version number:** 1  
**Metadata type:** DATA ELEMENT

**Definition:** Date of first commencing air and oxygen mix delivered through a High Flow Device.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** *Min. 10 Max. 10*

**Format:** DD/MM/YYYY

**Data domain:** Valid date

**Guide for use:** The use of a device specifically designed to deliver high intranasal flow which has been shown to be associated with some air pressure.

**Verification rules:** Is qualified by “Time of initiation of Nasal High Flow”.

**Related metadata:** Used in conjunction with “Hours of Nasal High Flow” and “Time of initiation of Nasal High Flow”.

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection
TIME OF INITIATION OF NASAL HIGH FLOW

**ANZNN label:** ‘StartHiFloTime’

**Admin status:** CURRENT 01/01/2009

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Time of first commencing air and oxygen mix delivered through a High Flow Device.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 5 Max. 5

**Format:** hh:mm (24 hour clock)

**Data domain:** Valid time

**Guide for use:** Use a 24 hour clock. The use of a device specifically designed to deliver high intranasal flow which has been shown to be associated with some air pressure.

**Verification rules:** Is qualified by time of birth.

**Related metadata:** Variable name has changed from ‘StartHiFlotime’ to ‘StartHiFloTime’ from 01/01/2012.

Used in conjunction with “Hours of Nasal High” Flow and “Date of initiation of Nasal High Flow”

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection
# DATE OF FINAL CESSATION OF NASAL HIGH FLOW

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<thead>
<tr>
<th>ANZNN label:</th>
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<tbody>
<tr>
<td>Admin status:</td>
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<td>Valid date</td>
</tr>
<tr>
<td>Guide for use:</td>
<td>Last date of the final episode of Nasal High Flow should be recorded.</td>
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<tr>
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<td>Is qualified by date and time of initiation of Nasal High Flow</td>
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<tr>
<td>Related metadata:</td>
<td>Used in conjunction with “Hours of Nasal High Flow” and “Time of final cessation of Nasal High Flow”</td>
</tr>
<tr>
<td>Source organisation:</td>
<td>ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection</td>
</tr>
</tbody>
</table>
## TIME OF FINAL CESSATION OF NASAL HIGH FLOW

**ANZNN label:** ‘CeaseHiFloTime’

**Admin status:** CURRENT 01/01/2009  
**Version number:** 1  
**Metadata type:** DATA ELEMENT

**Definition:** Time of ceasing air and oxygen mix delivered through a High Flow Device.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric  
**Field size:** Min. 5 Max. 5  
**Format:** hh:mm (24 hour clock)

**Data domain:** Valid time

**Guide for use:** Last date and time of the final episode of Nasal High Flow should be recorded.

**Verification rules:** Is qualified by date and time of initiation of Nasal High Flow

**Related metadata:** Variable name has changed from ‘CeaseHiFlotime’ to ‘CeaseHiFloTime’ from 01/01/2012.

Used in conjunction with “Hours of Nasal High Flow” and “Date of final cessation of Nasal High Flow”

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection
HOURS OF NASAL HIGH FLOW

**ANZNN label:** ‘HiFlohrs’

**Admin status:** CURRENT 01/01/2009

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Total number of hours of air and oxygen mix delivered through a High Flow Device in hours.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 5 Max. 5

**Format:** NNNNN

**Data domain:** Number representing total hours of Nasal High Flow.

**Guide for use:**

The number of hours of any form of Nasal High flow therapy is summed for all instances of this therapy. If Nasal High Flow is given intermittently, this counts as 24 hours (per day) of Nasal High Flow. For periods up to 96 hours, use the exact number of hours. The usual rounding up and down will apply, e.g. 1 hour 20 minutes is recorded as one hour, and 1 hour 30 minutes is recorded as 2 hours. For periods of greater than 96 hours, use the closest 24-hour period. Midnight on the date of the last day of Nasal High Flow is taken as cessation of the episode.

The overall duration of Nasal High Flow is calculated by the addition of hours counted in each episode.

For practical use, a converter chart is provided below:

<table>
<thead>
<tr>
<th>Days</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
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**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
ONGOING MECHANICAL VENTILATION

**ANZNN label:** ‘MV’

**Admin status:** CURRENT 01/01/2013

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Intubation for ongoing mechanical ventilation in babies receiving IPPV / IMV / HFOV / ETT CPAP for 4 or more hours. However babies who are ventilated for <4 hours but die are included.

**Context:** High-risk babies admitted for intensive care. Approaches to the early treatment of RDS include:

- Intubation within an hour of birth and administration of surfactant, followed by extubation and Nasal CPAP. Sometimes this approach is followed by later reintubation and commencement of ongoing mechanical ventilation.
- Early nasal CPAP, sometimes associated with late endotracheal intubation for administration of surfactant +/- commencement of ongoing mechanical ventilation.
- Commencement of ongoing mechanical ventilation immediately following resuscitation and intubation, +/- surfactant.
- Mechanical ventilation without surfactant

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**

- **0** Ongoing mechanical ventilation was never initiated
- **-1** Yes, Mechanical ventilation was used for at least 4 hours
- **99** Unknown

**Guide for use:** Is not related to the intubation at delivery room only for resuscitation.

**Related metadata:** Used in conjunction with “Hours of IPPV”, “Date of first intubation for mechanical ventilation” and “Time of first intubation for mechanical ventilation”

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection
**DATE OF FIRST INTUBATION FOR ONGOING MECHANICAL VENTILATION**

**ANZNN label:** ‘MVDate’

**Admin status:** CURRENT  01/01/2007

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Date of intubation for **ongoing mechanical ventilation** in babies receiving IPPV / IMV / HFOV / ETT CPAP for 4 or more hours. However babies who are ventilated for <4 hours but die are included.

**Context:** High-risk babies admitted for intensive care. Approaches to the early treatment of RDS include:

- Intubation within an hour of birth and administration of surfactant, followed by extubation and Nasal CPAP. Sometimes this approach is followed by later reintubation and commencement of ongoing mechanical ventilation.
- Early nasal CPAP, sometimes associated with late endotracheal intubation for administration of surfactant +/- commencement of ongoing mechanical ventilation.
- Commencement of ongoing mechanical ventilation immediately following resuscitation and intubation, +/- surfactant.
- Mechanical ventilation without surfactant

**Data type:** Numeric

**Field size:** *Min. 10 Max. 10*

**Format:** DD/MM/YYYY

**Data domain:** Valid date

**Guide for use:** Is not related to the intubation at delivery room only for resuscitation.

**Verification rules:** Should be ≥ date of birth.

Is qualified by “Ongoing Mechanical Ventilation”, “Date of Birth” and “Time of first intubation for mechanical ventilation”

**Related metadata:** Used in conjunction with “Hours of IPPV” and “Time of first intubation for ongoing mechanical ventilation”

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection
# TIME OF FIRST INTUBATION FOR ONGOING MECHANICAL VENTILATION

**ANZNN label:** 'MVTime'

**Admin status:** CURRENT 01/01/2007  
**Version number:** 1  
**Metadata type:** DATA ELEMENT

**Definition:** Time of intubation for ongoing mechanical ventilation in babies receiving IPPV / IMV / HFOV / ETT CPAP for 4 or more hours. However babies who are ventilated for <4 hours but die are included.

**Context:** High-risk babies admitted for intensive care. Approaches to the early treatment of RDS include:

- Intubation within an hour of birth and administration of surfactant, followed by extubation and Nasal CPAP. Sometimes this approach is followed by later reintubation and commencement of ongoing mechanical ventilation.
- Early nasal CPAP sometimes associated with late endotracheal intubation for administration of surfactant +/- commencement of ongoing mechanical ventilation.
- Commencement of ongoing mechanical ventilation immediately following resuscitation and intubation, +/- surfactant.
- Mechanical ventilation without surfactant.

**Data type:** Numeric  
**Field size:** Min. 5 Max. 5  
**Format:** hh:mm (24 hour clock)

**Data domain:** Valid time

**Guide for use:** Use 24 hour clock. It is not related to the intubation at delivery room only for resuscitation.

**Verification rules:** Is qualified by Time of birth

**Related metadata:** Used in conjunction with “Hours of IPPV” and “Date of first intubation for ongoing mechanical ventilation”

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection
### DATE OF FINAL EXTUBATION FROM MECHANICAL VENTILATION

**ANZNN label:** ‘CeaseMVDate’

**Admin status:** CURRENT 01/01/2015  
**Version number:** 1  
**Metadata type:** DATA ELEMENT

**Definition:** Date of final extubation (removal of endotracheal tube) from ongoing endotracheal mechanical ventilation or endotracheal CPAP, prior to discharge to home. IPPV / IMV / HFOV / ETT CPAP provided for less than four hours should be excluded. However, babies who are ventilated / intubated for less than four hours but die are included.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric  
**Field size:** Min. 10 Max.10  
**Format:** DD/MM/YYYY  
**Data domain:** Valid date

**Guide for use:** Is not related to the intubation at delivery room only for resuscitation.

**Verification rules:** Should be ≥ date of birth.  
Is qualified by date and time of first intubation for ongoing mechanical ventilation

**Related metadata:** Used in conjunction with “Hours of IPPV” and “Time of final extubation from mechanical ventilation”

**Source organisation:** ANZNN Advisory Council.
Ventilatory support

TIME OF FINAL EXTUBATION FROM MECHANICAL VENTILATION

**ANZNN label:** ‘CeaseMVTime’

**Admin status:** CURRENT 01/01/2015

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Time of final extubation (removal of endotracheal tube) from ongoing endotracheal mechanical ventilation or endotracheal CPAP, prior to discharge to home. IPPV / IMV / HFOV / ETT CPAP provided for less than four hours should be excluded. However, babies who are ventilated / intubated for less than four hours but die are included.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 5 Max. 5

**Format:** hh:mm (24 hour clock)

**Data domain:** Valid time

**Guide for use:** Use 24 hour clock.

**Verification rules:** Should be ≥ date of birth.

Is qualified by date and time of first intubation for ongoing mechanical ventilation

**Related metadata:** Used in conjunction with “Hours of IPPV” and “Date of final extubation from mechanical ventilation”

**Source organisation:** ANZNN Advisory Council.
HOURS OF INVASIVE VENTILATORY SUPPORT (VIA ETT)

**ANZNN label:** ‘IPPVhrs’

**Admin status:** CURRENT 01/01/2013

**Version number:** 3

**Metadata type:** DATA ELEMENT

**Definition:** Total number of hours of intermittent positive pressure ventilation (IPPV) or CPAP given via an endotracheal tube (ETT).

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 5 Max. 5

**Format:** NNNNN

**Data domain:** Number representing total hours of intermittent positive pressure ventilation or CPAP via an endotracheal tube.

**Guide for use:** The number of hours of any form of assisted ventilation therapy via an endotracheal tube is summed for all instances of this therapy. For periods up to 96 hours, use the exact number of hours. The usual rounding up and down will apply, e.g. 1 hour 20 minutes is recorded as one hour, and 1 hour 30 minutes is recorded as 2 hours.

For periods of greater than 96 hours, use the closest 24-hour period. For practical use, a converter chart is provided below:

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<td>1172</td>
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**Related metadata:** Supersedes “Days of intermittent positive pressure ventilation” version 1 – 01/01/1994.

Supersedes “Hours of intermittent positive pressure ventilation” version 2 – 01/01/2001

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
HIGH FREQUENCY OSCILLATORY VENTILATION (HFOV)

**ANZNN label:** ‘HFOV’

**Admin status:** CURRENT 01/01/1996

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Assisted mechanical ventilation via an endotracheal tube at high frequency (i.e. where small tidal volumes are presented at frequencies more than 4 Hz (240 per minute) given as respiratory support for this baby.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**

0  High frequency oscillatory ventilation never initiated
-1  Yes, high frequency oscillatory ventilation was initiated
99  Unknown

**Related metadata:** Variable name has changed from ‘HFOV?’ to ‘HFOV’ from 01/01/2012


**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
DATE OF INITIATION OF HIGH FREQUENCY OSCILLATORY VENTILATION (HFOV)

ANZNN label: ‘HFOVDate’

Admin status: CURRENT 01/01/2007
Version number: 1
Metadata type: DATA ELEMENT

Definition: Date of initiation of high frequency oscillatory ventilation (> 4 Hz) via an endotracheal tube, provided the HFOV is given for 30 minutes or more.

Context: High-risk babies admitted for intensive care. The time of initiation of high frequency oscillatory ventilation and the percentage of mechanical ventilation hours attributed to high frequency provide a guide as to whether this mode of ventilation was used prophylactically or as a form of rescue therapy.

Data type: Numeric
Field size: Min. 10 Max. 10
Format: DD/MM/YYYY

Data domain: Valid date

Guide for use: >30 minutes of HFOV should be recorded

Related metadata: Variable name has changed from ‘HFOVdate’ to ‘HFOVDate’ from 01/01/2012
Used in conjunction with “Hours of HFOV” and “Time of initiation of HFOV”.

Source organisation: ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection
# TIME OF INITIATION OF HIGH FREQUENCY OSCILLATORY VENTILATION (HFOV)

**ANZNN label:** 'HFOVTime'

**Admin status:** CURRENT 01/01/2007  
**Version number:** 1  
**Metadata type:** DATA ELEMENT

**Definition:** Time of initiation of high frequency oscillatory ventilation (> 4 Hz) via an endotracheal tube, provided the HFOV is given for 30 minutes or more.

**Context:** High-risk babies admitted for intensive care. The time of initiation of high frequency oscillatory ventilation and the percentage of mechanical ventilation hours attributed to high frequency provide a guide as to whether this mode of ventilation was used prophylactically or as a form of rescue therapy.

**Data type:** Numeric  
**Field size:** Min. 5 Max. 5  
**Format:** hh:mm (24 hour clock)

**Data domain:** Valid time

**Verification rules:** Is qualified by date of initiation of HFOV.

**Related metadata:** Variable name has changed from ‘HFOVtime’ to ‘HFOVTime’ from 01/01/2012.  
Used in conjunction with “Hours of HFOV” given to the baby and “Date of initiation of HFOV”

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection
**ANZNN label:** ‘HFOVhrs’

**Admin status:** CURRENT 01/01/2007

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Total number of hours of high frequency oscillatory ventilation given via an endotracheal tube, at >4Hz.

**Context:** High-risk babies admitted for intensive care. High frequency oscillatory ventilation is used variably by different practitioners. It is sometimes used prophylactically but often it is used for rescue. Very few infants who are mechanically ventilated with high frequency are managed with this form of ventilation alone.

**Data type:** Numeric

**Field size:** Min. 1 Max. 4

**Format:** NNNN

**Data domain:** Number representing total hours of high frequency oscillatory ventilation.

**Guide for use:** There is no 4 hour rule. However episodes of < 30 minutes are not counted unless the infant dies. If a baby is managed with 30 minutes of high frequency oscillatory ventilation this should be recorded, and this is rounded up to 1 hour.

**Related metadata:** Used in conjunction with “Date of initiation of HFOV” and “Time of initiation of HFOV”

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
# DATE OF FINAL ADDED OXYGEN THERAPY (SUPERSEDED)

**ANZNN label:** ‘LastO2’

**Admin status:** 01/01/1994 – 31/12/2010

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Date that supplemental oxygen was finally ceased for initial respiratory disease

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 10 Max. 10

**Format:** DD/MM/YYYY

**Data domain:** Valid dates

**Verification rules:**
- Must be ≥ Date of birth.
- Must be ≥ Date of admission

**Guide for use:**
- Four consecutive hours in any one 24-hour period constitutes a day. Any route of oxygen administration is used. If oxygen is ceased, and the baby then required respiratory support for the same illness, use final day of all the days that supplemental oxygen was used.
- Do not include days of respiratory support for subsequent illnesses such as that required after surgery, RSV etc. If the baby never received respiratory support leave blank.
- If the baby received only, 5 hours of oxygen on the date of birth, use that date.
- If the baby received supplemental oxygen after discharge from hospital, use the date of discharge for the final day of oxygen therapy.

**Related metadata:** Used in conjunction with “Home oxygen” and “Chronic lung disease”

- Superseded by “date of final added respiratory support (oxygen therapy or airway support)” version 3 – 01/01/2011

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
**DATE OF FINAL ADDED RESPIRATORY SUPPORT (OXYGEN THERAPY OR AIRWAY SUPPORT)**

**ANZNN label:** ‘LastRespSupp’

**Admin status:** CURRENT 01/01/2011

**Version number:** 3

**Metadata type:** DATA ELEMENT

**Definition:** Date that supplemental oxygen, high flow, CPAP or mechanical ventilation was finally ceased for initial respiratory disease or as a consequence of complications of it. This is confined to infants < 32 wks gestation.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 10 Max. 10

**Format:** DD/MM/YYYY

**Data domain:** Valid date

**Verification rules:** Must be ≥ Date of birth. Must be ≥ Date of admission

**Guide for use:** Four consecutive hours in any one 24-hour period constitutes a day. Any mode of respiratory support may be used. If respiratory support is ceased, and then the baby required respiratory support for the same illness, use final day of all the days that respiratory support was used.

- If the baby received only say, 5 hours of respiratory support, on the date of birth, use that date.
- If the baby never received respiratory support leave blank
- If the baby received supplemental oxygen after discharge from hospital, use the discharge date for the final day of respiratory support.
- If the baby has respiratory support terminated but subsequently reinstated and the reason is fundamentally related to the initial perinatal respiratory illness, i.e. it is chronic lung disease and not an inter-current problem such as a viral infection, the date of final respiratory support should reflect this.

Do not include days of respiratory support for subsequent illnesses such as that required after surgery, RSV etc. If the baby requires respiratory support because of stridor secondary to subglottic stenosis which evolved as a consequence of intubation +/- some chronic lung disease, regarding this as an extension of the initial respiratory illness is debatable. However, it is clearly a consequence of intubation related to the initial respiratory illness, and should be regarded as such. If the baby becomes oxygen dependent following RSV, this should be regarded as a consequence of the RSV + chronic lung disease, and excluded. If the baby is discharged on oxygen, this will be documented separately.
**Related metadata:** Used in conjunction with “Home oxygen” and “Respiratory support at 36 weeks post menstrual age”.

Supersedes “Date of final added oxygen therapy” version 1 – 01/01/1994.

Variable name has changed from ‘LastO2’ to ‘LastRespSupp’ from 01/01/2013.

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
## RESPIRATORY SUPPORT AT 36 WEEKS POST MENSTRUAL AGE

**ANZNN label:** ‘RespSupp36wk’

**Admin status:** CURRENT 01/01/2016

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Status of respiratory support at 36 weeks and 0 days / post menstrual age 252 days.

**Context:** High-risk babies admitted for intensive care at risk of chronic lung disease

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**

0  **Unknown** – information not available  
1  **No respiratory support**  
2  **Low flow air +/- oxygen with feeds** (≤1L / min)  
3  **Low flow oxygen** (≤1L / min)  
4  **Oxygen via head box or incubator**  
5  **High flow** >1L / min  
6  **Nasal CPAP**  
7  **Nasal ventilation** (includes nasal high frequency)  
8  **Endotracheal CPAP or ventilation** (includes high frequency)  
9  **Endotracheal tube alone**  
10 **Tracheostomy CPAP or ventilation** (includes high frequency)  
11 **Tracheostomy alone**

**Guide for use:** This must be recorded for every infant < 32 weeks gestation. Record status on the exact day, regardless of inter current illness or operative procedure. If more than one option is potentially applicable, record the most severe.

**Related metadata:** Supersedes “Chronic Lung Disease” version 1 – 01/01/1999

**Source organisation:** ANZNN Advisory Council
RESPIRATORY SUPPORT STATUS PRIOR TO SHIFT TEST

ANZNN label: ‘PreShiftRespSupp’

Admin status: CURRENT 01/01/2016
Version number: 1
Metadata type: DATA ELEMENT

Definition: Status of respiratory support immediately prior to Shift Test.

Context: High-risk babies admitted for intensive care at risk of chronic lung disease

Data type: Numeric
Field size: Min. 1 Max. 2
Format: NN

Data domain:
0 Unknown – information not available
1 No respiratory support
2 Low flow air +/- oxygen with feeds (≤1L / min)
3 Low flow oxygen (≤1L / min)
4 Oxygen via head box or incubator
5 High flow >1L / min
6 Nasal CPAP
7 Nasal ventilation (includes nasal high frequency)
8 Endotracheal CPAP or ventilation (includes high frequency)
9 Endotracheal tube alone
10 Tracheostomy CPAP or ventilation (includes high frequency)
11 Tracheostomy alone

Guide for use: This data set is confined to infants < 28 weeks gestation. If more than one form of respiratory support has been provided during the 24 hours prior to undertaking the Shift Test, select that provided immediately prior. If not applicable or if the Shift Test was not performed, leave blank.

The intent is for this test to be undertaken when the infant is most stable and well between 35 weeks and 0 days and 36 weeks and 6 days post menstrual age and preferably on the least respiratory support possible.

Related metadata: Used in conjunction with “Date of Shift Test/Modified Walsh Oxygen Reduction Air Trial”, “Respiratory support status during Shift Test”, “Fractional inspired oxygen concentration during Shift Test”, “Mean haemoglobin oxygen saturation during Shift Test” and “Modified Walsh Oxygen Reduction Air Trial”.

Source organisation: ANZNN Advisory Council
DATE OF SHIFT TEST / MODIFIED WALSH OXYGEN REDUCTION AIR TRIAL

**ANZNN label:** ‘ShiftDate’

**Admin status:** CURRENT 01/01/2016  
**Version number:** 1  
**Metadata type:** DATA ELEMENT

**Definition:** Date of Shift Test / Modified Walsh Oxygen Reduction Air Trial.

**Context:** High-risk babies < 28 weeks gestation at risk of chronic lung disease

**Data type:** Numeric  
**Field size:** Min. 10 Max. 10  
**Format:** DD/MM/YYYY

**Data domain:** Valid date

**Guide for use:** All infants < 28 weeks gestation have the Shift Test and, if appropriate, a Modified Walsh Oxygen Reduction Air Trial undertaken between 35 weeks and 0 days and 36 weeks 6 days postmenstrual age. This date is used to compute the postmenstrual age at which the test was performed.

The target oxygen saturation for the Shift test is 90-94%.

The Modified Walsh Oxygen Reduction Air Trial is performed on babies who were in low flow oxygen or air or were receiving <2 L/min of blended oxygen or air immediately prior to the Shift Test, and whose Shift Test FiO\(_2\) was <0.30 to maintain an SpO\(_2\) of 90-94% for the duration of the Shift Test. This air trial is achieved by extending the Shift Test through stepwise oxygen reduction to determine if infants who need low level of supplemental oxygen or flow can reach room air and maintain oxygen saturation ≥ 90%.

**Verification rules:** Must be > Date of birth.  
Must be ≤ Discharge date to home

**Related metadata:** Used in conjunction with “Respiratory support status prior to Shift Test”, “Respiratory support status during Shift Test”, “Fractional inspired oxygen concentration during Shift Test”, “Mean haemoglobin oxygen saturation during Shift Test” and “Modified Walsh Oxygen Reduction Air Trial”.


**Source organisation:** ANZNN Advisory Council
HOSPITAL OF SHIFT TEST

ANZNN label: ‘ShiftHosp’

Admin status: CURRENT 01/01/2016
Version number: 1
Metadata type: DATA ELEMENT

Definition: Hospital in which the Shift Test was performed.
Context: High-risk babies < 28 weeks gestation at risk of chronic lung disease
Data type: Text
Field size: Min. 10 Max. 40
Format: CCCCCCCC

Guide for use: All infants < 28 weeks gestation have the Shift Test and, if appropriate, a modified Walsh Oxygen Reduction Air Trial undertaken between 35 weeks and 0 days and 36 weeks 6 days postmenstrual age. The hospital location is used to compute the altitude at which the Shift Test was performed.

Related metadata: Used in conjunction with "Date of Shift Test / Modified Walsh Oxygen Reduction Air Trial"


Source organisation: ANZNN Advisory Council
**RESPIRATORY SUPPORT STATUS DURING SHIFT TEST**

**ANZNN label:** ‘ShiftRespSupp’

**Admin status:** CURRENT 01/01/2016

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Status of respiratory support whilst undertaking Shift Test.

**Context:** High-risk babies admitted for intensive care at risk of chronic lung disease.

**Data type:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:**
- 0 Unknown – information not available
- 1 No respiratory support
- 2 Nasal prongs and air / oxygen 2L / min
- 3 Head box
- 4 Incubator
- 5 High flow (humidified) ≥2L / min
- 6 Nasal CPAP / nasal ventilation (includes nasal high frequency)
- 7 Endotracheal / tracheostomy CPAP or ventilation (includes high frequency)

**Guide for use:** This data set is confined to infants < 28 weeks gestation. The intent is for this test to be undertaken when the infant is most stable and well between 35 weeks and 0 days and 36 weeks and 6 days post menstrual age and preferably on the least respiratory support possible.
**Related metadata:** Used in conjunction with “Respiratory support status prior to Shift Test”, “Date of Shift Test/Modified Walsh Oxygen Reduction Air Trial”, “Fractional inspired oxygen concentration during Shift Test”, “Mean haemoglobin oxygen saturation during Shift Test” and “Modified Walsh Oxygen Reduction Air Trial”.

**Source organisation:** ANZNN Advisory Council
FRACTIONAL INSPIRED OXYGEN CONCENTRATION DURING SHIFT TEST

**ANZNN label:** ‘ShiftFiO2’

**Admin status:** CURRENT 01/01/2016

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** The mean fractional inspired oxygen (FiO₂) concentration during the 15 minute Shift Test period.

**Context:** High-risk babies admitted for intensive care at risk of chronic lung disease.

**Data type:** Numeric

**Field size:** *Min. 2 Max. 4*

**Format:** N.NN

**Data domain:** Number representing the FiO₂ measured over the 15 minute test period, correct to 2 decimal places.

**Guide for use:** All infants < 28 weeks gestation have the Shift Test undertaken between 35 weeks and 0 days and 36 weeks 6 days postmenstrual age. This entails measurement of the mean Hb oxygen saturation over 15 minutes, whilst ensuring the oxygen saturation is kept between 90 and 94%. Both the FiO₂ and mean SpO₂ are recorded. If the FiO₂ needs to be adjusted during the 15 minute Shift Test period in order to maintain SpO₂ between 90 and 94%, then record the mean FiO₂.

For consistency, measurements are ideally performed 30 min post-feed whilst infant is resting quietly with no active intervention. We are most interested in the infant’s best shift measurement, rather than measurements obtained under conditions of increased work of breathing. Infants should be assessed in whichever position the nursing staff member feels achieves best SpO₂ (in the desired range of 90-94%) for that particular infant.

**Verification rules:** Must be ≥ 0.21 and < 1.00.

**Related metadata:** Used in conjunction with “Respiratory support status prior to Shift Test”, “Date of Shift Test/Modified Walsh Oxygen Reduction Air Trial”, “Respiratory support status during Shift Test”, “Mean haemoglobin oxygen saturation during Shift Test” and “Modified Walsh Oxygen Reduction Air Trial”.


**Source organisation:** ANZNN Advisory Council
MEAN HAEMOGLOBIN OXYGEN SATURATION DURING SHIFT TEST

**ANZNN label:** ‘ShiftSpO2’

**Admin status:** CURRENT  01/01/2016

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Mean haemoglobin oxygen saturation (SpO₂) measured over the 15 minutes of the Shift Test.

**Context:** High-risk babies admitted for intensive care at risk of chronic lung disease.

**Data type:** Numeric

**Field size:** Min. 2 Max. 3

**Format:** NNN

**Data domain:** Number representing mean SpO₂ (%) measured over the 15 minute Shift Test.

**Guide for use:** All infants < 28 weeks gestation have the Shift Test undertaken between 35 weeks and 0 days and 36 weeks 6 days postmenstrual age. This entails measurement of the mean SpO₂ over 15 minutes, whilst ensuring the oxygen saturation is kept between 90 and 94%.

Average SpO₂ is obtained by one of the following methods:

i) Download from an oximeter or other data-acquisition device, and averaging the values over the last 15 minutes of recording

ii) Calculating average SpO₂ from values noted at 1 minute intervals using one of the following 2 methods:

   a. Tabulated values of SpO₂ from patient’s monitor (set to display tabulated values at 1 min intervals)
   b. Manual notations by a nurse observer

For consistency, measurements should ideally be performed 30 min post-feed whilst infant is resting quietly with no active intervention. The intent is to determine the infant’s best shift measurement, rather than measurements obtained under conditions of increased work of breathing.

**Verification rules:** Must be > 80 and < 100.

**Related metadata:** Used in conjunction with “Respiratory support status prior to Shift Test”, “Date of Shift Test/Modified Walsh Oxygen Reduction Air Trial”, “Respiratory support status during Shift Test, “Fractional inspired oxygen concentration during Shift Test” and “Modified Walsh Oxygen Reduction Air Trial”.


**Source organisation:** ANZNN Advisory Council
MODIFIED WALSH OXYGEN REDUCTION AIR TRIAL

**ANZNN label:** ‘ModifiedWalsh’

**Admin status:** CURRENT 01/01/2016

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** The Modified Walsh Oxygen Reduction Air Trial requires weaning of FiO\textsubscript{2} by 2% every 5 minutes until in air. 5 minutes later all respiratory support is removed and a 15 minute air challenge undertaken.

**Context:** High-risk babies admitted for intensive care at risk of chronic lung disease.

**Data type:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:**

- 0 Unknown – information not available
- 1 Not performed
- 2 Successfully weaned to air with SpO\textsubscript{2} ≥ 90% for 15 minutes
- 3 Failed Modified Walsh Oxygen Reduction Air Trial

**Verification rules:** Infants with ‘PreShiftRespSupp’ = (1,2,3,4) should all have a Modified Walsh Oxygen Reduction Air Trial result.

**Guide for use:** This data set is confined to infants < 28 weeks gestation. The Modified Walsh Oxygen Reduction Air Trial is performed on babies who were in low flow oxygen or air or were receiving <2 L/min of blended oxygen or air immediately prior to the Shift Test, and whose Shift Test FiO\textsubscript{2} was <0.30 to maintain an SpO\textsubscript{2} of 90-94% for the duration of the Shift Test, in order to determine if infants who need low level of supplemental oxygen or flow can reach room air and maintain oxygen saturation ≥ 90%.

Following the Shift Test, the head box (preferred) test (OR crib/incubator oxygen OR nasal cannula plus Comfeel with a flow at 2 L/min via blender) is used to undertake a Modified Walsh Oxygen Reduction Air Trial. The blender of crib/incubator oxygen is reduced by 2% every 5 min. Head box OR nasal cannulae are not to be removed until baby has passed the blender air test with SpO\textsubscript{2} ≥ 90% for 5 minutes.

The time required to pass at the final room air trial has been shortened from that originally described by Walsh, to 15 mins. If the SpO\textsubscript{2} dips below 90% for more than 5 minutes (or below 80% for 15 seconds), or the infant has an apnoea for more than 20 seconds or the infant has bradycardia, the trial is ceased and recorded as Failed.

Infants who are not normally in receipt of respiratory support (ie. are nursed in room air) and maintain an SpO\textsubscript{2} ≥ 90% for the Shift Test, are recorded as having passed the Modified Walsh Oxygen Reduction Air Trial.
**Related metadata:** Used in conjunction with “Respiratory support status prior to Shift Test”, “Date of Shift Test/Modified Walsh Oxygen Reduction Air Trial”, “Respiratory support status during Shift Test”, “Fractional inspired oxygen concentration during Shift Test” and “Mean haemoglobin oxygen saturation during Shift Test”.

**Source documents:** Walsh et al. *Impact of a physiologic definition on bronchopulmonary dysplasia rates*. Pediatrics 2004; 114:1305-1311.

**Source organisation:** ANZNN Advisory Council
CHRONIC LUNG DISEASE (SUPERSEDED)

**ANZNN label:** ‘O2_36wk_’

**Admin status:** 01/01/1999 – 31/12/2015

**Version number:** 1

**Metadata type:** DERIVED DATA ELEMENT

**Definition:** The baby received any respiratory support (supplemental oxygen or intermittent positive pressure ventilation (IPPV) or continuous positive airways pressure (CPAP) or high flow) for a chronic pulmonary disorder on the day the baby reached 36 weeks’ postmenstrual age. This item is for babies born at less than 32 weeks gestation only.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No chronic lung disease</td>
</tr>
<tr>
<td>-1</td>
<td>Yes, the baby did have chronic lung disease</td>
</tr>
<tr>
<td>99</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

**Verification rules:**

- Date of final added respiratory support must be > Date of birth
- Main respiratory diagnosis must be > 1.

**Guide for use:**

- Four consecutive hours in any one 24-hour period constitutes the use of supplemental oxygen or respiratory support on that day.
- If respiratory support is ceased, and then the baby required more respiratory support for the same illness or another illness that relates to initial perinatal illness, use final day of all the days that respiratory support was provided. Hence if the baby is receiving respiratory support for their initial and now chronic pulmonary disorder on the day before and the day after the baby turns 36 weeks postmenstrual age, then record “yes”.
- The day the baby reaches 36 weeks’ postmenstrual age is considered to be the infant’s gestational age (completed weeks + days) plus chronological age in days. For example, a baby born at 28 weeks’ and four days’ gestation on January 1st, is 36 weeks’ postmenstrual age on 22nd February.
- This item is for babies born at less than 32 weeks’ gestation only.

**Related metadata:**

- Use in conjunction with “Date of final added respiratory support”, “Hours of IPPV”, “Hours of CPAP” and “Hours of high flow”.
- Variable name has changed from ‘O2_36wk?’ to ‘O2_36wk_’ from 01/01/2012.

**Source organisation:** ANZNN Advisory Committee.
POST-NATAL STEROIDS FOR CHRONIC LUNG DISEASE

**ANZNN label:** ‘SystCSCLD’

**Admin status:** CURRENT 01/01/2013

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** The infant was treated with systemic corticosteroids by any route post natally for chronic lung disease.

**Context:** High-risk babies admitted for intensive care. Systemic corticosteroids use in the treatment of evolving chronic lung disease or for the purpose of its prevention. Chronic lung disease has been associated with adverse neurodevelopmental outcome

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**
- 0  No systemic post-natal steroids for chronic lung disease
- -1 Yes, the baby did have post-natal steroids for chronic lung disease
- 99 Unknown

**Guide for use:** Corticosteroid used with the objectives of treatment of evolving chronic lung disease at any stage or to prevent development of chronic lung disease. It must not include corticosteroid use for the treatment of conditions such as post-extubation subglottic oedema or in the use for hypotension or any forms of corticosteroid deficiency.

**Source organisation:** ANZNN Advisory Committee, complies with NSW Neonatal Intensive Care Units Data Collection
HOME OXYGEN THERAPY

**ANZNN label:** ‘HmeO2’

**Admin status:** CURRENT 01/01/1994

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** The baby used supplemental oxygen at home after discharge from hospital.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**
- 0  *No supplemental oxygen used at home*
- -1  *Yes, home oxygen therapy*
- 99  *Unknown*

**Guide for use:** Must have required supplemental oxygen in hospital.

**Verification rules:** Date of final respiratory support = Date of Discharge to home or death.

Main respiratory diagnosis must be > 1

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
CARDIAC ULTRASOUND

**ANZNN label:** ‘CardiacUS’

**Admin status:** CURRENT 01/01/2018

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Cardiac ultrasound performed in the first 7 days of life for any clinical indication, including screening.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**
- 0  *No, baby did not receive cardiac ultrasound*
- 1  *Yes, baby did receive cardiac ultrasound*
- 99  *Unknown*

**Guide for use:** Includes cardiac ultrasound for structural and/or functional assessments, conducted, supervised or reviewed by a qualified person (CCPU or equivalent). Excludes cardiac ultrasound conducted purely for training purposes.

**Related metadata:** Used in conjunction with “Date of first cardiac ultrasound” and “Time of first cardiac ultrasound”

**Source organisation:** ANZNN Advisory Council
DATE OF FIRST CARDIAC ULTRASOUND

**ANZNN label:** ‘CardiacUSDate’

**Admin status:** CURRENT 01/01/2018

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Date of first cardiac ultrasound performed in the first 7 days of life for any clinical indication, including screening.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 10 Max. 10

**Format:** DD/MM/YYYY

**Data domain:** Valid date

**Guide for use:** Includes cardiac ultrasound for structural and/or functional assessments, conducted, supervised or reviewed by a qualified person (CCPU or equivalent). Excludes cardiac ultrasound conducted purely for training purposes.

**Related metadata:** Used in conjunction with “Cardiac ultrasound” and “Time of first cardiac ultrasound”

**Source organisation:** ANZNN Advisory Council
# TIME OF FIRST CARDIAC ULTRASOUND

**ANZNN label:** ‘CardiacUSTime’

**Admin status:** CURRENT 01/01/2018

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Time of first cardiac ultrasound performed in the first 7 days of life for any clinical indication, including screening.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 5 Max. 5

**Format:** hh:mm (24 hour clock)

**Data domain:** Valid time

**Guide for use:** Includes cardiac ultrasound for structural and/or functional assessments, conducted, supervised or reviewed by a qualified person (CCPU or equivalent). Excludes cardiac ultrasound conducted purely for training purposes.

**Related metadata:** Used in conjunction with “Cardiac ultrasound” and “Date of first cardiac ultrasound”

**Source organisation:** ANZNN Advisory Council
### PHARMACOLOGICAL TREATMENT OF PATENT DUCTUS ARTERIOSUS

**ANZNN label:** ‘PDADrug’

**Admin status:** CURRENT 01/01/2015  
**Version number:** 1  
**Metadata type:** DATA ELEMENT

**Definition:** Pharmacological treatment given to the infant to manage patent ductus arteriosus.  
**Context:** High-risk babies admitted for intensive care.  
**Data type:** Numeric  
**Field size:** Min. 1 Max. 2  
**Format:** NN

**Data domain:**  
- 0  *No, pharmacological treatment was not given*  
- -1  *Yes, pharmacological treatment was given*  
- 99  *Unknown*

**Source organisation:** ANZNN Advisory Council
FIRST PHARMACOLOGICAL AGENT FOR PATENT DUCTUS ARTERIOSUS

**ANZNN label:** ‘PDADrugName’

**Admin status:** CURRENT 01/01/2015

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Name of first pharmacological agent given to manage patent ductus arteriosus.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:**
0 Unknown
1 Ibuprofen
2 Indomethacin
3 Other – eg. Paracetamol.
4 Clinical trial

**Related metadata:** Used in conjunction with “Pharmacological treatment of patent ductus arteriosus”, “Date of first pharmacological treatment of patent ductus arteriosus” and “Time of first pharmacological treatment of patent ductus arteriosus”

**Source organisation:** ANZNN Advisory Council
DATE OF FIRST PHARMACOLOGICAL TREATMENT OF PATENT DUCTUS ARTERIOSUS

**ANZNN label:** ‘PDADrugDate’

**Admin status:** CURRENT 01/01/2015  
**Version number:** 1  
**Metadata type:** DATA ELEMENT

**Definition:** Date of first dose of pharmacological agent given to the infant to manage patent ductus arteriosus.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric  
**Field size:** Min. 10 Max. 10  
**Format:** DD/MM/YYYY

**Data domain:** Valid date

**Related metadata:** Used in conjunction with “Pharmacological treatment of patent ductus arteriosus”, “First pharmacological agent for patent ductus arteriosus” and “Time of first pharmacological treatment of patent ductus arteriosus”

**Source organisation:** ANZNN Advisory Council
TIME OF FIRST PHARMACOLOGICAL TREATMENT OF PATENT DUCTUS ARTERIOSUS

ANZNN label: ‘PDADrugTime’

Admin status: CURRENT 01/01/2015
Version number: 1
Metadata type: DATA ELEMENT

Definition: Time of first dose of pharmacological agent given to the infant to manage patent ductus arteriosus.

Context: High-risk babies admitted for intensive care.

Data type: Numeric
Field size: Min. 5 Max. 5
Format: hh:mm (24 hour clock)

Data domain: Valid time

Related metadata: Used in conjunction with “Pharmacological treatment of patent ductus arteriosus”, “First pharmacological agent for patent ductus arteriosus” and “Date of first pharmacological treatment of patent ductus arteriosus”

Source organisation: ANZNN Advisory Council
PROVEN NECROTISING ENTEROCOLITIS

**ANZNN label:** ‘NEC_’

**Admin status:** CURRENT 01/01/1994

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:**
1. Diagnosis at surgery or post mortem, or
2. Radiological diagnosis, a clinical history plus
   - pneumatosis intestinalis, or
   - portal vein gas, or
   - a persistent dilated loop on serial X-rays, or
3. Clinical diagnosis, a clinical history plus abdominal wall cellulitis and palpable abdominal mass.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**
- 0 No necrotising enterocolitis proven
- 1 Yes, necrotising enterocolitis proven
- 99 Unknown

**Related metadata:** Variable name has changed from ‘NEC?’ to ‘NEC_’ from 01/01/2012.

**Source documents:** Lawrence G, Tudehope D, Baumann K, Jeffery H, Gill A, Cole M, et al.


**Source organisation:** ANZNN Advisory Committee; derived from NSW Neonatal Intensive Care Units Data Collection.
SPONTANEOUS INTESTINAL PERFORATION NOT NEC ASSOCIATED

ANZNN label: ‘SIP’

Admin status: CURRENT 01/01/2013
Version number: 1
Metadata type: DATA ELEMENT

Definition: The infant sustained an intestinal perforation not associated with NEC nor with any bowel abnormality (obstruction / atresia) nor with any mechanical trauma (e.g. nasogastric tube).

Context: High-risk babies admitted for intensive care. Spontaneous intestinal perforations occur sometimes of unknown cause, sometimes associated with a patent ductus arteriosus or with treatment for same, and sometimes associated with corticosteroid treatment. Co-existence with NEC is regarded as exceptional.

Data type: Numeric
Field size: Min. 1 Max. 2
Format: NN

Data domain: 0 No, the baby did not have spontaneous intestinal perforation
-1 Yes, the baby did have spontaneous intestinal perforation
99 Unknown

Guide for use: SIP, usually a single perforation, without any radiological signs of NEC and/or without surgical diagnosis of NEC.

Source organisation: ANZNN Advisory Committee.
PROBIOTICS

ANZNN label: ‘Probiotic’

Admin status: CURRENT 01/01/2015
Version number: 1
Metadata type: DATA ELEMENT

Definition: Probiotics given to the infant.

Context: High-risk babies admitted for intensive care. Probiotics as a group has been shown in meta-analysis to be associated with reductions of necrotising enterocolitis, sepsis and mortality when introduced to infants born at less than 32 weeks gestation or with birth weight < 1500 grams.

Data type: Numeric
Field size: Min. 1 Max. 2
Format: NN

Data domain: 0 No, probiotics were not given
-1 Yes, probiotics were given
99 Unknown

Guide for use: This item is for babies born at less than 32 weeks' gestation or with birth weight < 1500 grams only. If not applicable, then answer “Unknown (99)”.

Source organisation: ANZNN Advisory Council.

Necrotising enterocolitis and infection
NUMBER OF EPISODES OF PROVEN INFECTION
(SUPERSEDED)

ANZNN label: ‘Infn’

Admin status: 1/01/1996 – 01/01/2011
Version number: 2
Date element type: DATA ELEMENT

Definition: The total number of separate episodes of proven bacteria, fungal or viral systemic infections for this baby during the entire hospital admission.

Context: High-risk babies admitted for intensive care

Data type: Numeric
Field size: Min. 1 Max. 2
Format: NN

Data domain: Number representing the number of episodes of proven infection.

Guide for use: Systemic sepsis is defined as a clinical picture consistent with sepsis and either a positive bacterial or fungal culture of blood and/or cerebrospinal fluid, or a positive urine culture by sterile collection only.

Infections with coagulase-negative staphylococci, and other potential contaminants, or group β streptococcal antigen detected in urine should be included only if the baby is considered clinically septic and there is supporting evidence such as raised white cell count or thrombocytopenia.

Viral infections must be proven by culture and/or haematological results consistent with infection.

Related metadata: Supersedes “Episodes of infection” version 1 – 01/01/1994


Source organisation: ANZNN Advisory Committee; derived from NSW Neonatal Intensive Care Units Data Collection.
Necrotising enterocolitis and infection

BACTERIAL, FUNGAL OR VIRAL INFECTION PRESENT

**ANZNN label:** ‘Infection_’

**Admin status:** CURRENT 01/01/2012

**Version number:** 1

**Date element type:** DATA ELEMENT

**Definition:** The presence of proven systemic bacterial or fungal sepsis or late onset nosocomial viral infection for this baby

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**

0  No, the baby did not have a proven bacterial, fungal or viral infection noted
-1 Yes, the baby did have a proven bacterial, fungal or viral infection noted
99 Unknown

**Guide for use:**

Systemic sepsis is defined as a clinical picture consistent with sepsis, and either a positive bacterial or fungal culture of blood and/or cerebrospinal fluid. For each episode of sepsis, the following conditions must apply:

- Isolation of an organism from at least one blood or CSF culture or identification via PCR in CSF and,
- After consideration of clinical and laboratory evidence, a decision is made to give the patient antibiotics with therapeutic intent against this organism.

For each episode of infection, the following conditions must not apply:

- Mixed coagulase negative staphylococcus or other skin flora contaminant episode.
- Viral infection should only be considered if initial symptoms occurred after 48 hours of birth.
- Clinical features consistent with viral infection
- Isolation or identification of an organism by PCR, immunofluorescence or similar technology from an appropriate body fluid eg mouth swab/saliva, rectal swab/faeces, nasopharyngeal aspirate, endotracheal aspirate, CSF, or other relevant tissues eg skin lesion
- Asymptomatic colonisation with rotavirus should be excluded.


NICU Infection Surveillance group of the Australian Infection Control Association.

**Source organisation:** ANZNN Advisory Committee; derived from NSW Neonatal Intensive Care Units Data Collection. ANZNN ANDS Reference Group.
TYPE OF INFECTION

**ANZNN label:** ‘Infection_Type1’, ‘Infection_Type2’, ‘Infection_Type3’, ‘Infection_Type4’

**Admin status:** CURRENT 01/01/2012

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** The type of the proven systemic bacterial or fungal infection or nosocomial viral infection present.

**Context:** High risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**
-1 Early infection (bacterial or fungal infection) – The presence of systemic bacterial or fungal sepsis with initial symptoms occurring prior to 48 hours after birth

0 Late infection (bacterial or fungal infection) – The presence of blood or CSF infection with initial symptoms occurring from 48 hours after birth

2 Viral infection – The presence of at least one episode of viral infection with initial symptoms occurring following 48 hours after birth

**Guide for use:** Must be coded as “yes” for ‘Bacterial, fungal or viral infection present’.

**Early infection (bacterial or fungal infection) –** For each episode of congenital sepsis, the following conditions must apply:
- Isolation of an organism from at least one blood or CSF culture or identification via PCR in CSF and,
- After consideration of clinical and laboratory evidence, a decision is made to give the patient antibiotics with therapeutic intent against this organism.

For each episode of infection, the following conditions must not apply:
- Mixed coagulase negative staphylococcus or other skin flora contaminant episode.

**Late infection (bacterial or fungal infection) –**
- Isolation of an organism from at least one blood or CSF culture or PCR identification in CSF and,
- After consideration of the clinical and laboratory evidence, a decision is made to treat with antibiotics with therapeutic intent against this organism.

The following conditions must not apply:
- Mixed coagulase negative staphylococci or other skin flora contaminant.
- Same organism isolated from blood or CSF during previous 14 days-repeat isolate.
**Viral infection** –
- Clinical features consistent with viral infection
- Isolation or identification of an organism by PCR, immunofluorescence or similar technology from an appropriate body fluid eg mouth swab/saliva, rectal swab/faeces, nasopharyngeal aspirate, endotracheal aspirate, CSF, or other relevant tissues eg skin lesion
- Asymptomatic colonisation with rotavirus should be excluded.

Multiple episodes of infection should be recorded in a separate table where possible as outlined below.

<table>
<thead>
<tr>
<th>BabyCODE</th>
<th>Infection_Type (Early or late sepsis, or viral infection)</th>
<th>Date_Inf (date of infection)</th>
<th>Name_Inf (organism)</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

**Related metadata:** Used in conjunction with “Name of organism identified by blood or CSF culture of systemic sepsis/ nosocomial viral infection” and “Date of collection positive blood or CSF culture for systemic sepsis or date of onset of nosocomal viral infection occurring after 48 hours of birth”.

Supersedes “Early onset bacterial or fungal sepsis” version 2 – 01/01/2006

Supersedes “Number of late-onset bacterial or fungal sepsis” version 1 – 01/01/2006

Supersedes "Episodes of nosocomial viral infection" version 1 – 01/01/2012

**Source organisation:** ANZNN Advisory Committee. ANZNN ANDS Reference Group.
NAME OF ORGANISM IDENTIFIED BY BLOOD OR CSF CULTURE OF SYSTEMIC SEPSIS/NOSOCOMIAL VIRAL INFECTION

ANZNN label: ‘Name_Inf1’, ‘Name_Inf2’, ‘Name_Inf3’, ‘Name_Inf4’

Admin status: CURRENT 01/01/2012
Version number: 1
Metadata type: DATA ELEMENT

Definition: The name of the organism identified by blood or CSF culture causing systemic sepsis or virus causing nosocomial infection.

Context: High risk babies admitted for intensive care

Data type: Text
Field size: Min. 10 Max. 40
Format: CCCCCCCCC

Guide for use: Must be coded as “yes” for ‘Bacterial, fungal or viral infection present’.

For each episode of sepsis, the following conditions must apply:

- Isolation of an organism from at least one blood or CSF culture or PCR identification in CSF and,
- After consideration of the clinical and laboratory evidence, a decision is made to treat with antibiotics with therapeutic intent against this organism.

The following conditions must not apply:

- Mixed coagulase negative staphylococci or other skin flora contaminant.
- Same organism isolated from blood or CSF during previous 14 days-repeat isolate.

Viral infection should only be considered if initial symptoms occurred after 48 hours of birth.

- Clinical features consistent with viral infection
- Isolation or identification of an organism by PCR, immunofluorescence or similar technology from an appropriate body fluid eg mouth swab/saliva, rectal swab/faeces, nasopharyngeal aspirate, endotracheal aspirate, CSF, or other relevant tissues eg skin lesion
- Asymptomatic colonisation with rotavirus should be excluded.

Related metadata: Is used in conjunction with “Type of infection” and “Date of collection of positive blood or CSF culture for systemic sepsis or date of onset of nosocomial viral infection occurring after 48 hours of birth”.

Supersedes “Name of organism identified by blood or CSF culture of early onset sepsis” version 1 – 01/01/2007.

Supersedes “Name of organism identified by blood or CSF culture of late onset sepsis” version 1 – 01/01/2007.
Necrotising enterocolitis and infection

Supersedes “Name of virus identified as cause of nosocomial viral infection” version 1 – 01/01/2012.

DATE OF COLLECTION OF POSITIVE BLOOD OR CSF CULTURE FOR SYSTEMIC SEPSIS OR DATE OF ONSET OF NOSOCOMIAL VIRAL INFECTION OCCURRING AFTER 48 HOURS OF BIRTH

**ANZNN label:** ‘Date_Inf1’, ‘Date_Inf2’, ‘Date_Inf3’, ‘Date_Inf4’

**Admin status:** CURRENT  01/01/2012

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:**
The date of the collection of blood or CSF culture for each episode of systemic sepsis, or the date of the onset of clinical illness caused by each episode of viral infection, with initial symptoms occurring after 48 hours of birth.

**Context:**
High risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 10 Max. 10

**Format:** DD/MM/YYYY

**Data domain:** Valid date

**Guide for use:**
Must be coded as “yes” for ‘Bacterial, fungal or viral infection present’. Leave blank when corresponding ‘Type of infection’ is coded as “Early infection”.

For each episode of late onset sepsis, the following conditions must apply:

- Isolation of an organism from at least one blood or CSF culture or PCR identification in CSF and,
- After consideration of the clinical and laboratory evidence, a decision is made to treat with antibiotics with therapeutic intent against this organism.

The following conditions must not apply:

- Mixed coagulase negative staphylococci or other skin flora contaminant.
- Same organism isolated from blood or CSF during previous 14 days-repeat isolate.

For each episode of nosocomial viral infection, the following conditions must apply:

- Clinical features consistent with viral infection
- Isolation or identification of an organism by PCR, immunofluorescence or similar technology from an appropriate body fluid eg mouth swab/saliva, rectal swab/faeces, nasopharyngeal aspirate, endotracheal aspirate, CSF, or other relevant tissues eg skin lesion
- Asymptomatic colonisation with rotavirus should be excluded
**Necrotising enterocolitis and infection**

**Related metadata:** Used in conjunction with “Type of infection” and “Name of organism identified by blood or CSF culture of systemic sepsis/ nosocomial viral infection”.

Supersedes “Date of collection of positive blood or CSF culture for each episode of late onset sepsis” version 1 – 01/01/2007.

Supersedes “Date of onset of each episode of nosocomial viral infection” version 1 – 01/01/2012.

**Source organisation:** ANZNN Advisory Committee. ANZNN ANDS Reference Group.
EARLY ONSET BACTERIAL OR FUNGAL SEPSIS (SUPERSEDED)

**ANZNN label:** ‘Early infection’

**Admin status:** 01/01/2006 – 31/12/2011

**Version number:** 2

**Metadata type:** DATA ELEMENT

**Definition:** The presence of systemic bacterial or fungal sepsis with initial symptoms occurring prior to 48 hours after birth.

**Context:** Isolation of an organism from at least one blood or CSF culture and, after consideration of the clinical and laboratory evidence, a decision is made to treat with antibiotics with therapeutic intent against this organism.

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**

- 0 No congenital fungal or bacterial infection noted
- -1 Yes, congenital fungal or bacterial infection noted
- 99 Unknown

**Guide for use:** For each episode of congenital sepsis, the following conditions must apply:

Isolation of an organism from at least one blood or CSF culture or identification via PCR in CSF and after consideration of clinical and laboratory evidence, a decision is made to give the patient antibiotics with therapeutic intent against this organism.

For each episode of infection, the following conditions must not apply:

Mixed coagulase negative staphylococcus or other skin flora – contaminant episode

**Related metadata:** Supersedes “Early infection” version 1 – 01/01/2002

Previous item included septicaemias only

**Source organisation:** ANZNN Advisory Committee
NUMBER OF EPISODES OF LATE-ONSET BACTERIAL OR FUNGAL SEPSIS (SUPERSEDED)

ANZNN label: ‘Late infection’

Admin status: 01/01/2006 – 31/12/2011
Version number: 1
Metadata type: DATA ELEMENT

Definition: The presence of at least one episode of blood or CSF infection with initial symptoms occurring from 48 hours after birth.

Context: High-risk babies admitted for intensive care

Data type: Numeric
Field size: Min. 1 Max. 2
Format: NN

Data domain: Number representing total number of episodes of late onset septicaemia or meningitis.

Guide for use:
- Isolation of an organism from at least one blood or CSF culture or PCR identification in CSF and;
- After consideration of the clinical and laboratory evidence, a decision is made to treat with antibiotics with therapeutic intent against this organism.

The following must not apply:
- Mixed coagulase negative staphylococci or other skin flora contaminant.
- Same organism isolated from blood or CSF during previous 14 days-repeat isolate.

Related metadata: Supersedes “Late infection” version 1 – 01/01/2002
Previous item included septicaemias only


Source organisation: ANZNN Advisory Committee
NAME OF ORGANISM IDENTIFIED BY BLOOD OR CSF CULTURE OF EARLY ONSET SEPSIS (SUPERSEDED)

**ANZNN label:** ‘Name_Einf’

**Admin status:** 01/01/2007 – 31/12/2011

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** The name of the bacteria or fungus causing systemic sepsis with initial symptoms occurring prior to 48 hours after birth.

**Context:** The profile of organisms causing early onset sepsis has changed over the years and continues to evolve. The profile should be monitored.

**Data type:** Text

**Field size:** Min. 10 Max. 40

**Format:** CCCCCCCCCC

**Guide for use:** For each episode of congenital BACTERIAL OR FUNGAL sepsis, the following conditions must apply: Isolation of an organism from at least one blood or CSF culture or identification via CSF PCR and after consideration of clinical and laboratory evidence, a decision is made to give the patient antibiotics with therapeutic intent against this organism.

For each episode of infection, the following conditions must not apply:

Mixed coagulase negative staphylococcus or other skin flora – contaminant episode

A list of commonly found organisms is provided in appendix. (used by NICUS)

**Related metadata:** Supersedes “Early infection” version 1 – 01/01/2002

Previous item included septicaemias only

**Source organisation:** ANZNN Advisory Committee
NAME OF ORGANISM IDENTIFIED BY BLOOD OR CSF CULTURE OF LATE ONSET SEPSIS (SUPERSEDED)

**ANZNN label:** ‘Name_Linf1’, ‘Name_Linf2’

**Admin status:** 01/01/2007 – 31/12/2011

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** The name of the bacteria or fungus causing systemic sepsis with initial symptoms occurring after 48 hours of birth.

**Context:** The profile of organisms causing late onset sepsis has changed over the years and continues to evolve. The profile should be monitored.

**Data type:** Text

**Field size:** Min. 10 Max. 40

**Format:** CCCCCCCCCC

**Guide for use:** For each episode of late onset sepsis, the following conditions must apply:

Isolation of an organism from at least one blood or CSF culture or identification of PCR CSF and after consideration of clinical and laboratory evidence, a decision is made to give the patient antibiotics with therapeutic intent against this organism.

For each episode of infection, the following conditions must not apply:

Mixed coagulase negative staphylococcus or other skin flora – contaminant episode

A list of commonly found organisms is provided in appendix. (As used by NICUS)

**Related metadata:** Supersedes “Late infection” version 1 – 01/01/2002

Previous item included septicaemias only

**Source organisation:** ANZNN Advisory Committee
DATE OF COLLECTION OF POSITIVE BLOOD OR CSF CULTURE FOR EACH EPISODE OF LATE ONSET SEPSIS (SUPERSEDED)

**ANZNN label:** ‘Date_Linf1’, ‘Date_Linf2’

**Admin status:** 01/01/2007 – 31/12/2011

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** The date of the collection of blood or CSF culture for each episode of systemic sepsis with initial symptoms occurring after 48 hours of birth.

**Context:** The profile of organisms causing late onset sepsis has changed over the years and continues to evolve. The profile should be monitored. It was suggested that the majority of late onset infections occur during the first 5 weeks of life.

**Data type:** Numeric

**Field size:** Min. 10 Max. 10

**Format:** DD/MM/YYYY

**Data Domain:** Valid date

**Guide for use:** For each episode of late onset sepsis, the following conditions must apply: Isolation of an organism from at least one blood or CSF culture or identification via CSF PCR and after consideration of clinical and laboratory evidence, a decision is made to give the patient antibiotics with therapeutic intent against this organism.

For each episode of infection, the following conditions must not apply:

Mixed coagulase negative staphylococcus or other skin flora – contaminant episode

A list of commonly found organisms is provided in appendix (used by NICUS).

**Related metadata:** Used in conjunction with “Late infection” and “Name of infection”

**Source organisation:** ANZNN Advisory Committee
### NEONATAL MAJOR SURGERY

**ANZNN label:** ‘Surgery_’

**Admin status:** CURRENT 01/01/1995

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** This baby had surgery which involved opening a body cavity during this admission.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No neonatal surgery</td>
</tr>
<tr>
<td>-1</td>
<td>Yes, major surgery took place during this admission</td>
</tr>
<tr>
<td>99</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

**Related metadata:** Variable name has changed from ‘Surgery?’ to ‘Surgery_’ from 01/01/2012.

**Source organisation:** ANZNN Advisory Committee; derived from NSW Neonatal Intensive Care Units Data Collection.
ICD 10 CODE FOR EACH EPISODE OF MAJOR NEONATAL SURGERY


**Admin status:** CURRENT 01/01/2007

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** This baby had surgery which involved opening a body cavity during this admission. Names of the surgical procedures that this baby underwent, should be given.

**Context:** High-risk babies admitted for intensive care. The range of major surgical interventions should be recorded. Documentation is also a cross check on the validity of the coding process.

**Data type:** Text

**Field size:** Min. 10 Max. 40

**Format:** CCCCCCCCCC

**Guide for use:** Must be coded as “yes” for Neonatal major surgery.

A list of commonly used ICD 10 codes (as used by NICUS) is attached in appendix. Multiple episodes of surgery should be recorded in a separate table where possible, as outlined below.

<table>
<thead>
<tr>
<th>BabyCODE</th>
<th>Surg_Desc (name of operation)</th>
<th>Surg_code (ICD10code)</th>
<th>Surg_BlockCode (block number)</th>
<th>DateSurg</th>
<th>SurgHosp (Hospital where surgery took place)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

**Related metadata:** Variable name has changed from ‘namesurg1’ to ‘Surg_Desc1’ from 01/01/2012.

**Source organisation:** ANZNN Advisory Committee; derived from NSW Neonatal Intensive Care Units Data Collection.
**DATE OF EACH EPISODE OF MAJOR NEONATAL SURGERY**

<table>
<thead>
<tr>
<th><strong>ANZNN label:</strong></th>
<th>‘DateSurg1’, ‘DateSurg2’, ‘DateSurg3’, ‘DateSurg4’, ‘DateSurg5’, ‘DateSurg6’</th>
</tr>
</thead>
</table>

**Admin status:** CURRENT 01/01/2007

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** This baby had surgery which involved opening a body cavity during this admission. Dates of the surgical procedures that this baby underwent should be given.

**Context:** High-risk babies admitted for intensive care. The dates of major surgical interventions should be recorded. Documentation is also a cross check on the validity of the coding process.

**Data type:** Numeric

**Field size:** Min. 10 Max. 10

**Format:** DD/MM/YYYY

**Data domain:** Valid dates

**Guide for use:** Date for each episode of surgery should be provided and recorded in a separate surgery table.

**Related metadata:** Variable name has changed from ‘dateSurg1’ to ‘DateSurg1’ from 01/01/2012.

**Source organisation:** ANZNN Advisory Committee; derived from NSW Neonatal Intensive Care Units Data Collection.
HOSPITAL OF SURGERY


**Admin status:** CURRENT 01/01/2012

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Specify the name of each hospital to which the baby was transferred/admitted for surgery

**Context:** High-risk babies admitted for intensive care

**Data type:** Character

**Field size:** Min. 10 Max. 40

**Format:** CCCCCCCCCC

**Data domain:** Characters representing the registration hospital code.

**Guide for use:** This item is for babies undergoing major surgery during this hospital admission. Surgery requiring readmission from home is not recorded by ANZNN.

**Related metadata:** Variable name has changed from ‘SurgHosp’ to ‘SurgHosp1’ from 01/01/2012.

**Source organisation:** ANZNN Advisory Committee.
PARENTERAL NUTRITION

**ANZNN label:** ‘PNS’

**Admin status:** CURRENT 01/01/2012

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Intravenous infusion of a nutria solution consisting of a minimum of dextrose and protein but generally providing a complete nutrient infusion including electrolytes, calcium, phosphorus, zinc, trace elements, vitamins and fat.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**
- 0 Parenteral nutrition never initiated
- -1 Yes parenteral nutrition initiated
- 99 Unknown

**Guide for use:** This item is only for babies born at less than 32 weeks gestation or with a birth weight of less than 1500 grams. If not applicable, then answer “Unknown (99)”.

**Source organisation:** ANZNN Advisory Committee.
**DATE OF INITIATION OF PARENTERAL NUTRITION**

**ANZNN label:** ‘StartPNSDate’

**Admin status:** CURRENT  01/01/2012  

**Version number:**  1  

**Metadata type:** DATA ELEMENT  

**Definition:** Date of initiation of parenteral nutrition.  

**Context:** High-risk babies admitted for intensive care  

**Data type:** Numeric  

**Field size:** Min. 10 Max 10  

**Format:** DD/MM/YYYY  

**Data domain:** Valid date  

**Guide for use:** This item is only for babies born at less than 32 weeks gestation or with a birth weight of less than 1500 grams.  

**Verification rules:** Is qualified by date of birth.  

**Related metadata:** Used in conjunction with “Time of initiation of parenteral nutrition” and “Hours of parenteral nutrition”  

**Source organisation:** ANZNN Advisory Committee.
TIME OF INITIATION OF PARENTERAL NUTRITION

ANZNN label: ‘StartPNSTime’

Admin status: CURRENT 01/01/2012
Version number: 1
Metadata type: DATA ELEMENT

Definition: Time of initiation of parenteral nutrition.

Context: High-risk babies admitted for intensive care

Data type: Numeric
Field size: Min. 5 Max. 5
Format: hh:mm (24 hour clock)

Data domain: Valid time

Guide for use: This item is only for babies born at less than 32 weeks gestation or with a birth weight of less than 1500 grams.

Verification rules: Is qualified by date of birth

Related metadata: Used in conjunction with “Date of initiation of parenteral nutrition” and “Hours of parenteral nutrition”

Source organisation: ANZNN Advisory Committee.
DATE OF CESSATION OF PARENTERAL NUTRITION

**ANZNN label:** ‘CeasePNSDate’

**Admin status:** CURRENT 01/01/2012

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Date of cessation of parenteral nutrition.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 10 Max. 10

**Format:** DD/MM/YYYY

**Data domain:** Valid date

**Guide for use:** This item is only for babies born at less than 32 weeks gestation or with a birth weight of less than 1500 grams.

**Verification rules:** Is qualified by date of initiation of parenteral nutrition

**Related metadata:** Used in conjunction with “Date of initiation of parenteral nutrition” and “Hours of parenteral nutrition”

**Source organisation:** ANZNN Advisory Committee.
TIME OF CESSION OF PARENTERAL NUTRITION

**ANZNN label:** ‘CeasePNSTime’

**Admin status:** CURRENT 01/01/2012

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Time of cessation of parenteral nutrition.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 5 Max. 5

**Format:** hh:mm (24 hour clock)

**Data domain:** Valid time

**Guide for use:** This item is only for babies born at less than 32 weeks gestation or with a birth weight of less than 1500 grams.

**Verification rules:** Is qualified by date of birth

**Related metadata:** Used in conjunction with “Date of initiation of parenteral nutrition” and “Hours of parenteral nutrition”.

**Source organisation:** ANZNN Advisory Committee.
**HOURS OF PARENTERAL NUTRITION**

**ANZNN label:** ‘PNShrs'

**Admin status:** CURRENT 01/01/2012

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Total number of hours of parenteral nutrition.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 5 Max. 5

**Format:** NNNNN

**Data domain:** Number representing total hours of parenteral nutrition

**Guide for use:** This item is only for babies born at less than 32 weeks gestation or with a birth weight of less than 1500 grams.

The number of hours of parenteral nutrition is summed for all instances of this therapy. If parenteral nutrition is given intermittently, 12 or more hours in any one day counts as a full 24 hour day. For periods up to 96 hours use the exact number of hours. The usual rounding up and down will apply, e.g. 1 hour 20 minutes is recorded as one hour, and 1 hour 30 minutes is recorded as two hours. For periods of greater than 96 hours, use the closest 24-hour period.

For practical use a converter chart is provided:

<table>
<thead>
<tr>
<th>Days</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
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<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours</td>
<td>120</td>
<td>144</td>
<td>168</td>
<td>192</td>
<td>216</td>
<td>240</td>
<td>264</td>
<td>288</td>
<td>312</td>
<td>336</td>
<td>360</td>
<td>384</td>
<td>408</td>
<td>432</td>
<td>456</td>
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<table>
<thead>
<tr>
<th>Days</th>
<th>20</th>
<th>21</th>
<th>22</th>
<th>23</th>
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<th>29</th>
<th>30</th>
<th>31</th>
<th>32</th>
<th>33</th>
<th>34</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours</td>
<td>480</td>
<td>504</td>
<td>528</td>
<td>552</td>
<td>576</td>
<td>600</td>
<td>624</td>
<td>648</td>
<td>672</td>
<td>696</td>
<td>720</td>
<td>744</td>
<td>768</td>
<td>792</td>
<td>816</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Days</th>
<th>35</th>
<th>36</th>
<th>37</th>
<th>38</th>
<th>39</th>
<th>40</th>
<th>41</th>
<th>42</th>
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<th>44</th>
<th>45</th>
<th>46</th>
<th>47</th>
<th>48</th>
<th>49</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours</td>
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<td>864</td>
<td>888</td>
<td>912</td>
<td>936</td>
<td>960</td>
<td>984</td>
<td>1008</td>
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<td>1080</td>
<td>1104</td>
<td>1128</td>
<td>1152</td>
<td>1172</td>
</tr>
</tbody>
</table>

**Source organisation:** ANZNN Advisory Committee.
HOME GAVAGE FEEDING

**ANZNN label:**  ‘Hmegavage’

**Admin status:**  CURRENT  01/012012

**Version number:**  1

**Metadata type:**  DATA ELEMENT

**Definition:**  The baby was discharged home with a nasogastric tube in place to allow gavage / infusion feeding at home.

**Context:**  Some babies are discharged home on gavage feeds. This practice is increasing and has the potential to impact on duration of stay by gestation data so it is important for it to be monitored. When calculating the duration of hospital stay by gestation for benchmarking purposes, the data should be presented in a manner that enables such babies to be identified.

**Data type:**  Numeric

**Field size:**  Min. 1 Max. 2

**Format:**  NN

**Data domain:**  
0  No, not discharged with gavage tube
-1  Yes, discharged to home with a gavage tube
99  Unknown

**Guide for use:**  Must have required gavage feeding in hospital. Babies who have gavage or infusion feeds commenced following their first discharge to home because of poor growth should be excluded.

**Source organisation:**  ANZNN Advisory Committee
THERAPEUTIC HYPOTHERMIA

ANZNN label: ‘hypotherm’

Admin status: CURRENT 01/01/2007

Version number: 1

Metadata type: DATA ELEMENT

Definition: Intentional cooling of an infant of any gestational age to a core temperature <35°C (generally 33-34°C).

Context: High-risk babies admitted for intensive care. The evidence in support for controlled hypothermia as a means of limiting the reperfusion injury that follows perinatal asphyxia in term infants has been evolving over the last 10 years. Several multi centre randomized controlled trials have provided evidence which supports this approach in moderately asphyxiated term infants. Some units will choose to offer this therapy. Hypothermia does have potential for harm and its use should be carefully monitored.

Data type: Numeric

Field size: Min. 1 Max. 2

Format: NN

Data domain: 0 No therapeutic hypothermia
-1 Yes, therapeutic hypothermia
99 Unknown

Source organisation: ANZNN Advisory Committee
DATE OF INITIATION OF THERAPEUTIC HYPOTHERMIA

ANZNN label: ‘StartCoolDate’

Admin status: CURRENT 01/01/2012
Version number: 1
Metadata type: DATA ELEMENT

Definition: Date of commencement of therapeutic hypothermia.
Context: High-risk babies admitted for intensive care.
Data type: Numeric
Field size: Min. 10 Max. 10
Format: DD/MM/YYYY

Data domain: Valid date

Guide for use: Cooling is normally for 72 hours + period of up to 6 hours of rewarming. Hypothermia begins at the onset of cooling and ends at the onset of warming.

Verification rules: Is qualified by “Date of cessation of therapeutic hypothermia”
Related metadata: Used in conjunction with “Time of initiation of therapeutic hypothermia”
Source organisation: ANZNN Advisory Committee.
# TIME OF INITIATION OF THERAPEUTIC HYPOTHERMIA

**ANZNN label:** ‘StartCoolTime’

**Admin status:** CURRENT 01/01/2012

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Time of commencement of therapeutic hypothermia.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** *Min. 5 Max. 5*

**Format:** hh:mm (24 hour clock)

**Data domain:** Valid time

**Guide for use:** Cooling is normally for 72 hours + period of up to 6 hours of rewarming. Hypothermia begins at the onset of cooling and ends at the onset of warming.

**Related metadata:** Used in conjunction with “Date of initiation of therapeutic hypothermia”

**Source organisation:** ANZNN Advisory Committee.
### DATE OF CESSATION OF THERAPEUTIC HYPOTHERMIA

**ANZNN label:** ‘CeaseCoolDate’

**Admin status:** CURRENT 01/01/2012

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Date of cessation of therapeutic hypothermia.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 10 Max. 10

**Format:** DD/MM/YYYY

**Data domain:** Valid date

**Guide for use:** Cooling is normally for 72 hours + period of up to 6 hours of rewarming. Hypothermia begins at the onset of cooling and ends at the onset of warming.

**Verification rules:** Is qualified by “Date of initiation of therapeutic hypothermia”

**Related metadata:** Used in conjunction with “Time of cessation of therapeutic hypothermia”

**Source organisation:** ANZNN Advisory Committee.
## TIME OF CESSATION OF THERAPEUTIC HYPOTHERMIA

**ANZNN label:** ‘CeaseCoolTime’

**Admin status:** CURRENT 01/01/2012

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Time of cessation of cessation of therapeutic hypothermia

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 5 Max. 5

**Format:** hh:mm (24 hour clock)

**Data domain:** Valid time

**Guide for use:** Cooling is normally for 72 hours + period of up to 6 hours of rewarming. Hypothermia begins at the onset of cooling and ends at the onset of warming.

**Related metadata:** Used in conjunction with “Date of cessation of therapeutic hypothermia”

**Source organisation:** ANZNN Advisory Committee.
PRINCIPAL REASON FOR NON COMPLETION OF FULL 72 HOURS OF HYPOTHERMIA

**ANZNN label:** ‘Hypothermceased’

**Admin status:** CURRENT 01/01/2016

**Version number:** 2

**Metadata type:** DATA ELEMENT

**Definition:** The principal reason why therapeutic hypothermia was terminated early / before 72 hours of treatment had been completed.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**
0  *Not ceased before 72 hours* (default)
1  *Palliation*
2  *Recognised as not fulfilling standard criteria for cooling*
3  *Fulfilled standard criteria for cooling but clinical improvement suggests no need*
4  *Qualification equivocal with change of clinical decision making*
5  *Severe coagulopathy not responding to blood products*
6  *Hypotension not responding to inotrope*
7  *Severe PPHN refractory to iNO*
8  *Arrhythmia*
9  *Reason for early cessation not known*
10  *Death*

**Guide for use:** Cooling is normally for 72 hours + period of up to 6 hours of rewarming. If this is not achieved a reason should be given. Hypothermia begins at the onset of cooling and ends at the onset of warming. Distinguishing between options 2, 3 and 4 is likely to be difficult as it requires careful case note documentation. If this is the case, record as unknown.

**Related Metadata:** Supersedes “Principal reason for non completion of full 72 hours of hypothermia” version 1 – 01/01/2012.

**Source organisation:** ANZNN Advisory Committee, derived from NSW Neonatal Intensive Care Units Data Collection
DATE OF USUAL TWO MONTH IMMUNISATION

**ANZNN label:** ‘DateImmun’

**Admin status:** CURRENT 01/01/2007

**Version number:** 2

**Metadata type:** DATA ELEMENT

**Definition:** The date when the usual 2 month vaccination is given.

**Context:** High-risk babies admitted for intensive care. Immunisation is important. Delays in immunisation are common because of concerns for adverse reaction, particularly in extremely preterm infants.

**Data type:** Numeric

**Field size:** *Min.* 10 *Max.* 10

**Format:** DD/MM/YYYY

**Data domain:** Valid date

**Guide for use:** If not vaccinated prior to discharge leave blank.

**Related Metadata:** Supersedes “Immunisation status” version 1 – 01/01/2003.

Variable name has changed from ‘dateImmun’ to ‘DatelImmun’ from 01/01/2012.

**Source organisation:** ANZNN Advisory Committee
EARLY BREAST MILK FEEDING

ANZNN label: ‘Bmonset’

Admin status: CURRENT 01/01/2003
Version number: 1
Metadata type: DATA ELEMENT

Definition: Mother provided breast milk for baby at initiation of enteral feeding.
Context: High-risk babies admitted for intensive care
Data type: Numeric
Field size: Min. 1 Max. 2
Format: NN

Data domain:
0  No breast milk given
-1  Yes, mother provided breast milk for baby at initiation of enteral feeding
99  Unknown

Guide for use: This item is for babies born at less than 32 weeks’ gestation or with birth weight < 1500 grams only. If not applicable, then answer “Unknown (99)”.

It is not necessary for the breast milk to be the first feed or for breast milk to be the only milk used. A combination of breast milk and formula is often necessary. The key issue is that mothers expressed breast milk is provided to the infant during the first weeks as feeding is progressively established.

Related metadata: Used in conjunction with “Breast milk feeding at discharge”

Variable name has changed from ‘BMonset’ to ‘Bmonset’ from 01/01/2012.

Source organisation: ANZNN Advisory Committee.
DONOR BREAST MILK

**ANZNN label:** ‘DonorBM’

**Admin status:** CURRENT 01/01/2017

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Donor breast milk given to baby during admission, in any quantity.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** *Min.* 1 *Max.* 2

**Format:** NN

**Data domain:**
- 0  *No donor breast milk given*
-1  *Yes, donor breast milk given to baby*
99  *Unknown*

**Guide for use:** This item is for babies born at less than 32 weeks’ gestation or with birth weight < 1500 grams only. If not applicable, then answer “Unknown (99)”.

**Source organisation:** ANZNN Advisory Council.
BREAST MILK FEEDING AT DISCHARGE

**ANZNN label:** ‘Bmdischarge’

**Admin status:** CURRENT 01/01/2003

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Mother still providing breast milk for baby at discharge from hospital.

**Context:** High-risk babies admitted for intensive care.

**Data type:** Numeric

**Field size:** Min. 2 Max. 2

**Format:** NN

**Data domain:**

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No baby not receiving breast milk</td>
</tr>
<tr>
<td>-1</td>
<td>Mother still providing breast milk for her baby at discharge from hospital</td>
</tr>
<tr>
<td>99</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

**Guide for use:** This item is for babies born at less than 32 weeks' gestation or with a birth weight <1500 grams only. If not applicable, then answer “Unknown (99)”.

**Related metadata:** Variable name has changed from ‘BMdischarge’ to ‘Bmdischarge’ from 01/01/2012.

Used in conjunction with “Early breast milk feeding”

**Source organisation:** ANZNN Advisory Committee
DATE FULL ENTERAL FEEDING ACHIEVED (DISCONTINUED)

ANZNN label: ‘Datefullfeed’

Admin status: 01/01/2007 – 01/01/2011
Version number: 1
Metadata type: DATA ELEMENT

Definition: The date the infant reached enteral feeds of 150 ml/kg/day or lower if on a restricted fluid intake as full feed, for example for cardiac conditions with or without nutritional additives.

Context: High-risk babies admitted for intensive care. The postnatal age at which full enteral feeding is achieved varies with different feeding practices.

Data type: Numeric
Field size: Min. 10 Max. 10
Format: DD/MM/YYYY

Data domain: Valid date

Guide for use: This item is for babies born at less than 32 weeks’ gestation or with birth weight < 1500 grams only.

It is not uncommon for a central venous line to be left in place for a day or two after parenteral nutrition has been ceased. Enteral feeding only, is defined by the removal of this source of IV fluid and / or nutrition.

A large variation in enteral feed volume as the final full feed volume or at the time TPN is ceased. Considerable number of infants may receive intravenous medication with infusion of KVO. Enteral feed volume of 150 mls/kg/day appears to be a reasonable common ground of ceasing TPN before further grading up of feeds to varying final volume (up to 200ml/kg/day or higher). Some babies may be fluid restricted to 100 or 120 ml/kg/day for medical reasons and grade up nutrition intake with caloric supplements instead of volume.

Related metadata: Supersedes “Breast feeding at discharge” version 1 – 01/01/2003.
Superseded by Parenteral Nutrition data items.

Source organisation: ANZNN Advisory Committee.
BABY REGAINED BIRTH WEIGHT

**ANZNN label:** ‘BWtg’

**Admin status:** CURRENT 01/01/2013  
**Version number:** 1  
**Metadata type:** DATA ELEMENT

**Definition:** Birth weight regained and maintained before discharge to home.

**Context:** The postnatal age at which weight is regained is influenced by intravenous and oral feeding practices which are not standard.

**Data type:** Numeric  
**Field size:** Min. 2 Max. 2  
**Format:** NN

**Data domain:**  
0  No, baby did not regain birth weight before discharge to home  
-1 Baby regained birth weight before discharge to home  
99 Unknown

**Guide for use:** This item is for babies born at less than 32 weeks’ gestation or with birth weight < 1500 grams only. If not applicable, then answer “Unknown (99)”.

**Related metadata:** Used in conjunction with “Birth Weight” and “Date Baby Regained Birth Weight”

**Source organisation:** ANZNN Advisory Council.
DATE BABY REGAINED BIRTH WEIGHT

**ANZNN label:** ‘DateBWtg’

**Admin status:** CURRENT 01/01/2007

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** The date when birth weight is regained and maintained.

**Context:** The postnatal age at which weight is regained is influenced by intravenous and oral feeding practices which are not standard.

**Data type:** Numeric

**Field size:** Min. 10 Max. 10

**Format:** DD/MM/YYYY

**Data domain:** Valid date

**Guide for use:** This item is for babies born at less than 32 weeks' gestation or with birth weight < 1500 grams only.

It is not uncommon for sick infants to be weighed less frequently than every day. The best estimate should therefore be provided if this is the case.

**Related metadata:** Used in conjunction with “Birth weight”.

Variable name has changed from ‘dateBWtg’ to ‘DateBWtg’ from 01/01/2012.

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
WEIGHT AT TRANSFER

**ANZNN label:** ‘WtTfer’

**Admin status:** CURRENT 01/01/2018

**Version number:** 2

**Metadata type:** DATA ELEMENT

**Definition:** Weight at the last transfer from an NICU to another hospital for continuing care before discharge to home.

**Context:** Provide a dated measurement of growth outcome for very premature infants that can be adjusted to gestational age as z-scores.

**Data type:** Numeric

**Field size:** Min. 3 Max. 4

**Format:** NNNN

**Data domain:** 3 - 4 digit field representing the weight in grams

**Guide for use:** This item is for babies born at less than 32 weeks’ gestation or with birth weight < 1500 grams only. If not applicable, leave blank.

**Related metadata:** Used in conjunction with “Date weighed at transfer”.

Supersedes “Weight at back transfer” version 1 – 01/01/2017.

**Source organisation:** ANZNN Advisory Council.
DATE WEIGHED AT TRANSFER

ANZNN label: ‘WtTferDate’

Admin status: CURRENT 01/01/2018
Version number: 2
Metadata type: DATA ELEMENT

Definition: Date when the baby was weighed at the last transfer from an NICU to another hospital for continuing care before discharge to home.

Context: Provide a dated measurement of growth outcome for very premature infants that can be adjusted to gestational age as z-scores.

Data type: Numeric
Field size: Min. 10 Max. 10
Format: DD/MM/YYYY

Data domain: Valid date

Guide for use: This item is for babies born at less than 32 weeks' gestation or with birth weight < 1500 grams only. If not applicable, leave blank.

Related metadata: Used in conjunction with “Weight at transfer”.
Supersedes “Weight at back transfer” version 1 – 01/01/2017.

Source organisation: ANZNN Advisory Council.
## WEIGHT AT BACK TRANSFER (SUPERSEDED)

**ANZNN label:** 'WtBackTfer'

**Admin status:** 01/01/2017 – 31/12/2017

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Weight at the last back transfer from an NICU to a special care nursery (level 2 hospital) before discharge to home.

**Context:** Provide a dated measurement of growth outcome for very premature infants that can be adjusted to gestational age as z-scores.

**Data type:** Numeric

**Field size:** Min. 3 Max. 4

**Format:** NNNN

**Data domain:** 3 - 4 digit field representing the weight in grams

**Guide for use:** This item is for babies born at less than 32 weeks’ gestation or with birth weight < 1500 grams only. If not applicable, leave blank.

**Related metadata:** Used in conjunction with “Date weighed at back transfer”.

**Source organisation:** ANZNN Advisory Council.
<table>
<thead>
<tr>
<th><strong>DATE WEIGHED AT BACK TRANSFER (SUPERSEDED)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ANZNN label:</strong></td>
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<tr>
<td><strong>Admin status:</strong></td>
</tr>
<tr>
<td><strong>Version number:</strong></td>
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<td><strong>Metadata type:</strong></td>
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<tr>
<td><strong>Definition:</strong></td>
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<td><strong>Data type:</strong></td>
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<td><strong>Field size:</strong></td>
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<tr>
<td><strong>Format:</strong></td>
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<tr>
<td><strong>Data domain:</strong></td>
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<tr>
<td><strong>Guide for use:</strong></td>
</tr>
<tr>
<td><strong>Related metadata:</strong></td>
</tr>
<tr>
<td><strong>Source organisation:</strong></td>
</tr>
</tbody>
</table>
WEIGHT AT DISCHARGE TO HOME OR AT TERM

**ANZNN label:** ‘WtHome40wk’

**Admin status:** CURRENT 01/01/2017

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Weight at discharge to home, or at 40 weeks’ post menstrual age if prolonged hospitalisation.

**Context:** Provide a dated measurement of growth outcome for very premature infants that can be adjusted to gestational age as z-scores.

**Data type:** Numeric

**Field size:** Min. 3 Max. 4

**Format:** NNNN

**Data domain:** 3 - 4 digit field representing the weight in grams

**Guide for use:**

This item is for babies born at less than 32 weeks’ gestation or with birth weight < 1500 grams only.

Very premature infants are mostly discharged before or around the expected date of confinement (EDC). Weight closest to 40 weeks’ post menstrual age is to be used if infant had an extended stay in hospital beyond 40 weeks corrected age.

If not applicable, leave blank.

**Related metadata:** Used in conjunction with “Date weighed at discharge to home or at term”.

**Source organisation:** ANZNN Advisory Council.
DATE WEIGHED AT DISCHARGE TO HOME OR AT TERM

**ANZNN label:** ‘WtHome40wkDate’

**Admin status:** CURRENT 01/01/2017

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Date when the baby was weighed at discharge to home, or at 40 weeks’ post menstrual age if prolonged hospitalisation.

**Context:** Provide a dated measurement of growth outcome for very premature infants that can be adjusted to gestational age as z-scores.

**Data type:** Numeric

**Field size:** Min. 10 Max. 10

**Format:** DD/MM/YYYY

**Data domain:** Valid date

**Guide for use:** This item is for babies born at less than 32 weeks’ gestation or with birth weight < 1500 grams only.

Very premature infants are mostly discharged before or around the expected date of confinement (EDC). Weight closest to 40 weeks’ post menstrual age is to be used if infant had an extended stay in hospital beyond 40 weeks corrected age.

If not applicable, leave blank.

**Related metadata:** Used in conjunction with "Weight at discharge to home or at term".

**Source organisation:** ANZNN Advisory Council.
# MAXIMUM GRADE OF LEFT SIDED PERIVENTRICULAR HAEMORRHAGE

**ANZNN label:** ‘Left_IVH’

**Admin status:** CURRENT 01/01/2014  
**Version number:** 1  
**Metadata type:** DATA ELEMENT

**Definition:**  
Worst grade of periventricular haemorrhage seen on the left side of the head by imaging or post mortem examination during the first 14 days of life.

**Context:**  
High-risk babies admitted for intensive care. Bilateral IVH is associated with worse outcome than unilateral; and extensive periventricular haemorrhagic infarct (PVHI) with higher mortality and adverse outcomes.

**Data type:** Numeric  
**Field size:** Min. 1 Max. 1  
**Format:** N

**Data domain:**  
0 None – Ultrasound / post mortem shows no haemorrhage  
1 Grade 1 – Subependymal germinal matrix haemorrhage  
2 Grade 2 – Intraventricular haemorrhage  
3 Grade 3 – Intraventricular haemorrhage with ventricle distended with blood  
4 Grade 4 – Localised intraparenchymal haemorrhage  
5 Grade 4 – Extensive intraparenchymal haemorrhage  
9 Not examined – by ultrasound or by post mortem examination

**Guide for use:**  
This item is for babies born at less than 32 weeks' gestation or with birth weight < 1500 grams only. If not applicable, then answer “Not examined (9)”. Early ventricular dilatation may occur with or without haemorrhages. Mild ventricular dilatation without intra-ventricular blood distension is excluded (not Grade 3).

Localised intraparenchymal haemorrhage / haemorrhagic infarction is defined as being solitary and mainly confined to one of the following territories:
- Anterior Frontal:  
- Posterior Frontal:  
- Parietal:  
- Occipital:  
- Temporal:  
- Thalamus:

Extensive intraparenchymal haemorrhage / haemorrhagic infarction is defined as involving two or more of the territories. Note: exclude echodensity which resolves within 10 days.
Related metadata: Supersedes “Maximum grade of intraventricular haemorrhage” version 2 – 01/01/1996


Bassan H et al 2007, Neurodevelopmental outcome in survivors of periventricular haemorrhagic infarction Pediatrics 120;785-792.

Source organisation: ANZNN Advisory Council
MAXIMUM GRADE OF RIGHT SIDED PERIVENTRICULAR HAEMORRHAGE

**ANZNN label:** ‘Right_IVH’

**Admin status:** CURRENT 01/01/2014

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Worst grade of periventricular haemorrhage seen on the right side of the head by imaging or post mortem examination during the first 14 days of life.

**Context:** High-risk babies admitted for intensive care. Bilateral IVH is associated with worse outcome than unilateral; and extensive periventricular haemorrhagic infarct (PVHI) with higher mortality and adverse outcomes.

**Data type:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:**

- 0 **None** – Ultrasound / post mortem shows no haemorrhage
- 1 **Grade 1** – Subependymal germinal matrix haemorrhage
- 2 **Grade 2** – Intraventricular haemorrhage
- 3 **Grade 3** – Intraventricular haemorrhage with ventricle distended with blood
- 4 **Grade 4 – Localised** intraparenchymal haemorrhage
- 5 **Grade 4 – Extensive** intraparenchymal haemorrhage
- 9 **Not examined** – by ultrasound or by post mortem examination

**Guide for use:** This item is for babies born at less than 32 weeks' gestation or with birth weight < 1500 grams only. If not applicable, then answer “Not examined (9)”. Early ventricular dilatation may occur with or without haemorrhages. Mild ventricular dilatation without intra-ventricular blood distension is excluded (not Grade 3).

Localised intraparenchymal haemorrhage / haemorrhagic infarction is defined as being solitary and mainly confined to one of the following territories:

- **Anterior Frontal:**
- **Posterior Frontal:**
- **Parietal:**
- **Occipital:**
- **Temporal:**
- **Thalamus:**

Extensive intraparenchymal haemorrhage / haemorrhagic infarction is defined as involving two or more of the territories. Note: exclude echodensity which resolves within 10 days.

Localised intraparenchymal haemorrhage / haemorrhagic infarction is defined as being solitary and mainly confined to one of the following territories:

- **Anterior Frontal:**
  - n = 25 (43%)
- **Posterior Frontal:**
  - n = 42 (72%)
- **Parietal:**
  - n = 49 (84%)
- **Occipital:**
  - n = 9 (16%)
- **Temporal:**
  - n = 4 (7%)
- **Thalamus:**
  - n = 2 (3%)
**Related metadata:** Supersedes “Maximum grade of intraventricular haemorrhage” version 2 – 01/01/1996


**Source organisation:** ANZNN Advisory Council
CEREBELLAR HAEMORRHAGE

**ANZNN label:** ‘CerebellarHaem’

**Admin status:** CURRENT 01/01/2014

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Most extensive cerebellar haemorrhage noted by imaging or post mortem examination during the first 14 days of life.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:** 0 No cerebellar haemorrhage – Mastoid ultrasound views undertaken and no cerebellar haemorrhage / post mortem shows no cerebellar haemorrhage

1 Left hemisphere haemorrhage only

2 Right hemisphere haemorrhage only

3 Haemorrhage in vermis only

4 Bilateral hemisphere haemorrhage

5 Haemorrhage in either or both hemispheres AND vermis

9 Not examined – No ultrasound mastoid view and no post mortem examination.

**Guide for use:** This item is for babies born at less than 32 weeks’ gestation or with birth weight < 1500 grams only. If not applicable, then answer “Not examined (9)”. Mastoid view is required for this detection. Findings from the usual cranial ultrasound via anterior fontanel are not reliable.


**Source organisation:** ANZNN Advisory Council
DATE OF LATE HEAD ULTRASOUND

ANZNN label: ‘USd6wk’

Admin status: CURRENT 01/01/1996
Version number: 2
Metadata type: DATA ELEMENT

Definition: Date of the cerebral ultrasound scan nearest to six weeks of age, provided it is between 4 and 8 weeks of age. Results of this scan are listed in related fields of ventricular dilatation or cysts observed within this period. If worst dilatation is different to worst cysts on late scan then date of scan should be worst cysts date as for a higher order of significance.

Context: High-risk babies admitted for intensive care
Data type: Numeric
Field size: Min. 10 Max. 10
Format: DD/MM/YYYY
Data domain: Valid date

Guide for use: This item is for babies born at less than 32 weeks’ gestation or with birth weight < 1500 grams only. Data is confined to ultrasounds performed between 4 and 8 weeks of age. Accept finding if transferred to Level II units between 3 to 4 weeks of age.

If the infant is transferred to a level II unit prior to 4 weeks of age and it is not practicable to obtain an ultrasound within the defined range, data will be accepted from an ultrasound performed between 3-4 weeks. However, it must be noted that there is a small risk that significant leukomalacia will be missed if the ultrasound is done before 4 weeks of age.

If date of the worst dilatation is different to the date of the worst cyst then use date of worst cyst.

Verification rules: Date must be ≥ date of birth. Check if > 365 days and age must be ≥ 4 weeks and ≤ 8 weeks. Accept verification if transferred to a level II unit at age ≥ 3 weeks and < 4 weeks.

Related metadata: Used in conjunction with “Ventricle size”, “Cerebral Cysts (left)” and “Cerebral cysts (right)”

Source organisation: ANZNN Advisory Council
**VENTRICLE SIZE**

**ANZNN label:** ‘VentricleSize’

**Admin status:** CURRENT 01/01/2014

**Version number:** 3

**Metadata type:** DATA ELEMENT

**Definition:**
Ventricular size measured by the ultrasound scan closest to six weeks (4 to 8 weeks) of age, as the largest measurement from either ventricle.

**Context:**
High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 2 Max. 4

**Format:** NN.N

**Data domain:** Record the measurement to the nearest 0.1mm. Record 0 for not distended but not measured.

**Guide for use:**
This item is for babies born at less than 32 weeks' gestation or with birth weight < 1500 grams only. Record the measurement for the largest ventricle. Some asymmetry of ventricles is common.

**Verification rules:**
If date of late ultrasound is not missing, ventricular size measurement is not missing.

The lateral ventricle measurement is taken at the mid body in the coronal view at the level of the foramen of Monroe.

The normal range for this measurement is 0 – 2.9mm (95% CL) and is independent of gestational age and postnatal age up to 42 weeks corrected age.

**Related metadata:**
Used in conjunction with “Date of late head ultrasound”

Supersedes “Ventricle size” version 2 – 01/01/1996

**Source document:**

**Source organisation:** ANZNN Advisory Council
CEREBRAL CYSTS (LEFT)

ANZNN label: ‘Left_Cysts’

Admin status: CURRENT 01/01/2014
Version number: 1
Metadata type: DATA ELEMENT

Definition: Cystic change in left cerebral hemisphere measured by the ultrasound scan closest to six weeks of age. Record worst cystic periventricular leukomalacia severity (extensive or localised) if more cystic changes seen in 4 to 8 week scans.

Context: High-risk babies admitted for intensive care; extensive cystic leukomalacia has worse outcome. Specific localised site outcome is not consistently reported.

Datatype: Numeric
Field size: Min. 1 Max. 1
Format: N

Data domain:
0 No cysts – No cystic lesions seen on ultrasound
1 Porencephalic cyst(s)
2 Periventricular leukomalacia primarily confined to one of the regions: anterior frontal, posterior frontal, parietal, temporal or occipital region (same as defined for periventricular haemorrhage)
3 Extensive leukomalacia involving two or more of the above regions
9 Unknown – Information not available, includes not scanned.

Guide for use:
This item is for babies born at less than 32 weeks' gestation or with birth weight < 1500 grams only.

Note: ependymal cysts, cysts of the choroid plexus and conatal cysts are considered normal variants and are excluded. If any of these are present score as no cysts.

Note: periventricular leukomalacia regions: (see figure for periventricular haemorrhage).

Related metadata: Used in conjunction with “Date of late head ultrasound”
Supersedes “Cerebral cystic formations” version 1 – 01/01/1994


Source organisation: ANZNN Advisory Council
CEREBRAL CYSTS (RIGHT)

**ANZNN label:** ‘Right_Cysts’

**Admin status:** CURRENT 01/01/2014

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:**
Cystic change in right cerebral hemisphere measured by the ultrasound scan closest to six weeks of age. *Record worst cystic periventricular leukomalacia severity (extensive or localised) if more cystic changes seen in 4 to 8 week scans.*

**Context:**
High-risk babies admitted for intensive care; extensive cystic leukomalacia has worse outcome. Specific localised site outcome is not consistently reported.

**Datatype:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:**
0  **No cysts** – No cystic lesions seen on ultrasound
1  **Porencephalic cyst(s)**
2  **Periventricular leukomalacia primarily confined to one of the regions:** *anterior frontal, posterior frontal, parietal, temporal or occipital region* (same as defined for periventricular haemorrhage)
3  **Extensive leukomalacia involving two or more of the above regions**
9  **Unknown** – Information not available, includes not scanned.

**Guide for use:**
This item is for babies born at less than 32 weeks’ gestation or with birth weight < 1500 grams only.

Note: ependymal cysts, cysts of the choroid plexus and conatal cysts are considered normal variants and are excluded. If any of these are present score as no cysts.

Note: periventricular leukomalacia regions: (see figure for periventricular haemorrhage).

**Related metadata:**
Used in conjunction with "Date of late head ultrasound"

Supersedes “Cerebral cystic formations” version 1 – 01/01/1994.

**Source documents:**

**Source organisation:** ANZNN Advisory Council
MAXIMUM GRADE OF INTRAVENTRICULAR HAEMORRHAGE (SUPERSEDED)

**ANZNN label:** ‘IVH’

**Admin status:** 01/01/1996 – 31/12/2013

**Version number:** 2

**Metadata type:** DATA ELEMENT

**Definition:** Worst grade of intraventricular haemorrhage seen on either side of the head by imaging or post mortem examination during the first ten days of life.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:**
- 0 None – Ultrasound / post mortem shows no haemorrhage.
- 1 Grade 1 – Subependymal germinal matrix haemorrhage.
- 2 Grade 2 – Intraventricular haemorrhage with no ventricular distension.
- 3 Grade 3 – Intraventricular haemorrhage with ventricle distended with blood.
- 4 Grade 4 – Intraparenchymal haemorrhage.
- 5 Not examined – by ultrasound or by post mortem examination.

**Related metadata:** Supersedes previous IVH version 1 – 01/01/1994

Superseded by “Maximum grade of left sided periventricular haemorrhage” and “Maximum grade of right sided periventricular haemorrhage” version 1 – 01/01/2014


**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
## VENTRICLE SIZE (SUPERSEDED)

<table>
<thead>
<tr>
<th><strong>ANZNN label:</strong></th>
<th>‘Ventricles’</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Admin status:</strong></td>
<td>01/01/1996 – 31/12/2013</td>
</tr>
<tr>
<td><strong>Version number:</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Metadata type:</strong></td>
<td>DATA ELEMENT</td>
</tr>
</tbody>
</table>

**Definition:** Ventricular size measured by the ultrasound scan closest to six weeks (4-8 weeks) of age.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:**
- **0** Unknown – Information not available, includes not scanned.
- **1** No dilatation – Ventricle size is less than or equal to 97<sup>th</sup> centile.
- **2** Dilatation – Ventricle size > 97<sup>th</sup> centile for gestation, but ≤ 4 mm
- **3** Hydrocephalus – Ventricle size is > 4 mm (larger than 97<sup>th</sup>centile for gestation) or hydrocephalus present that required a shunt or any form of drainage (permanent or transient).

**Guide for use:** This item is for babies born at less than 32 weeks' gestation or with birth weight < 1500 grams only.

Ventricular index is measured (in mm) as the furthest lateral extent of each ventricle from the midline measured at the level of Foramen of Monro.

**Related metadata:** Used in conjunction with “Date of late head ultrasound”

Supersedes previous ventricle size version 1 – 01/01/1994


**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
VENTRICULAR INDEX (SUPERSEDED)

**ANZNN label:** ‘VI6wk’

**Admin status:** 01/01/1999 – 31/12/2013

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Size of the lateral ventricle measured by the ultrasound scan closest to six weeks (4-8 weeks) of age.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 2 Max. 2

**Format:** NN

**Data domain:** Number representing the ventricular index in millimetres

If value is missing or unknown use 0.

**Guide for use:** This item is for babies born at less than 32 weeks’ gestation or with birth weight < 1500 grams only.

To be recorded when ventricular dilatation thought likely (i.e. ‘dilatation’ for item ‘ventricle size’).

Ventricular index is measured (in mm) as the furthest lateral extent of each ventricle from the midline measured at the level of Foramen of Monro.

**Related metadata:** Used in conjunction with “Date of late head ultrasound”


**Source organisation:** ANZNN Advisory Committee.
#### CEREBRAL CYSTIC FORMATIONS (SUPERSEDED)

<table>
<thead>
<tr>
<th>ANZNN label:</th>
<th>‘Cysts’</th>
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</thead>
<tbody>
<tr>
<td>Admin status:</td>
<td>01/01/1996 – 31/12/2013</td>
</tr>
<tr>
<td>Version number:</td>
<td>2</td>
</tr>
<tr>
<td>Metadata type:</td>
<td>DATA ELEMENT</td>
</tr>
</tbody>
</table>

**Definition:** Changes in brain parenchyma measured by the ultrasound scan closest to six weeks of age.

**Context:** High-risk babies admitted for intensive care

**Datatype:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:**
- 0 **Unknown** – Information not available, includes not scanned.
- 1 **No cysts** – No cystic lesions seen on ultrasound.
- 2 **Porencephalic cyst(s)** – Parenchymal lesions corresponding to grade 4 intraventricular haemorrhage
- 3 **Periventricular leukomalacia** – Refers to the ischaemic brain injury affecting the periventricular white matter in the boundary zones supplied by terminal branches of the both the centripetal and centrifugal arteries
- 4 **Encephaloclastic porencephaly** – relatively late development of extensive echo-dense and cystic lesions involving the periphery of the cerebrum

**Guide for use:** This item is for babies born at less than 32 weeks' gestation or with birth weight < 1500 grams only.

**Related metadata:** Used in conjunction with “Date of late head ultrasound”

Supersedes “Cerebral cystic formations” version 1 - 01/01/1994

Superseded by “Cerebral cysts (left)” and “Cerebral cysts (right)” version 1 – 01/01/2014

**Source documents:**

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
BABY MEETS LOCAL CRITERIA FOR EYE EXAMINATION

**ANZNN label:** ‘ROPeligibleExam’

**Admin status:** CURRENT 01/01/2001  
**Version number:** 1  
**Metadata type:** DATA ELEMENT

**Definition:** The baby meets the local criteria for examining the eyes for retinopathy of prematurity at hospital to which the baby is registered.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric  
**Field size:** 
*Min.* 1  
*Max.* 2  
**Format:** NN

**Data domain:**  
0 No, baby did not meet local criteria for an examination of eyes  
-1 Yes, did meet local criteria for an examination for retinopathy of prematurity  
99 Unknown

**Guide for use:** This item is for babies born at less than 32 weeks' gestation or with birth weight < 1500 grams only. If not applicable, then answer “Unknown (99)”.

**Related metadata:** Used in conjunction with “Retinopathy of prematurity”

**Source organisation:** ANZNN Advisory Committee.
**ROP FOLLOWED UNTIL RETINAL FULL VASCULARISATION**

**ANZNN label:** ‘Retmaturity’

**Admin status:** CURRENT 01/01/2007

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** The Ophthalmic follow up is complete with documentation of either no retinopathy or resolution of retinopathy with the worst stage being recorded.

**Context:** High-risk babies admitted for intensive care. A number of infants have incomplete follow up and this creates a serious ascertainment bias.

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**
- 0 No
- 1 Yes
- 99 Unknown

**Guide for use:** This item is for babies born at less than 32 weeks' gestation or with birth weight < 1500 grams only.

This can include those babies discharged home and followed post discharge until full retinal vascularisation – may be up to two months. It is anticipated that infants will be followed to full vascularisation including after discharge from hospital.

**Related metadata:** Used in conjunction with “Retinopathy of prematurity”

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
RETINOPATHY OF PREMATURITY

ANZNN label: ‘ROP’

Admin status: CURRENT 01/01/1994
Version number: 1
Metadata type: DATA ELEMENT

Definition: Worst stage of retinopathy of prematurity seen in either eye.

Context: High-risk babies admitted for intensive care

Data type: Numeric
Field size: Min. 1 Max. 1
Format: N

Data domain:
0 None — yes examined, no changes seen.
1 Stage I – Demarcation line separating avascular from vascular retinal regions.
2 Stage II – Ridge – demarcation line increased in volume to extend out of the plane of the retina.
3 Stage III – Ridge with extra retinal fibrovascular proliferation. May be continuous with posterior edge of ridge or posterior but disconnected from the ridge, or into the vitreous.
4 Stage IV – Retinal detachment. In Stage IV the detachment is subtotal, and for Stage V there is total detachment.
5 Not examined – No eye examination performed.

Guide for use: This item is for babies born at less than 32 weeks’ gestation or with birth weight < 1500 grams only.
The worst stage should be recorded. Sometimes this is after discharge from the primary hospital or even after discharge to home. Every effort should be made to achieve this assessment outcome.

Related metadata: Used in conjunction with “Baby meets local criteria for eye examination”


Source organisation: ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
## SURGICAL THERAPY FOR RETINOPATHY OF PREMATURITY

### ANZNN label: ‘ROPRx’

<table>
<thead>
<tr>
<th>Admin status:</th>
<th>CURRENT 01/01/1994</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version number:</td>
<td>1</td>
</tr>
<tr>
<td>Metadata type:</td>
<td>DATA ELEMENT</td>
</tr>
</tbody>
</table>

### Definition:
Any surgical therapy used to treat retinopathy of prematurity. Includes, laser or cryotherapy.

### Context:
High-risk babies admitted for intensive care

### Data type:
Numeric

### Field size:
Min. 1 Max. 2

### Format:
NN

### Data domain:
<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No surgical therapy for retinopathy of prematurity received</td>
</tr>
<tr>
<td>-1</td>
<td>Yes, surgical therapy given for retinopathy of prematurity</td>
</tr>
<tr>
<td>99</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

### Guide for use:
This item is for babies born at less than 32 weeks’ gestation or with birth weight < 1500 grams only.

### Related metadata:
Used in conjunction with “Retinopathy of prematurity”
Stage of treatment may vary with new treatment criteria.

### Source organisation:
ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units
MEDICAL (VEGF INHIBITION) THERAPY FOR RETINOPATHY OF PREMATURITY

**ANZNN label:** ‘ROP_VEGF’

**Admin status:** CURRENT 01/01/2012

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Medical treatment of ROP with a Vascular endothelial growth factor (VEGF) inhibitor.

**Context:** Vascular endothelial growth factor (VEGF) inhibitors have the capacity to abort the evolution of ROP. Bevacizumab is one of several antibody blockers with this potential and is likely to be used for the treatment of severe ROP. In general it is used for zone 2 disease and usually following failed laser.

There is concern that angiogenesis inhibitors such as bevacizumab may have deleterious effects on developing neonatal vascular beds elsewhere in treated neonates, so it is important to document its use.

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No, (VEGF) inhibitor therapy not used</td>
</tr>
<tr>
<td>-1</td>
<td>Yes, (VEGF) inhibitor therapy given for retinopathy of prematurity</td>
</tr>
<tr>
<td>99</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

**Guide for use:** This item is for babies born at less than 32 weeks’ gestation or with birth weight < 1500 grams only.

**Related metadata:** Used in conjunction with "Retinopathy of prematurity"

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
Death

DIED

**ANZNN label:** ‘Died_’

**Admin status:** CURRENT 01/01/1994

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** The death of a live born baby occurring prior to discharge from hospital.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**
- 0  **No, survived to discharge to home**
- -1 **Yes, died during first hospitalisation**
- 99 **Unknown**

**Related metadata:** Variable name has changed from ‘Died?’ to ‘Died_’ from 01/01/2012.

Used in conjunction with “Date of death”

**Source organisation:** ANZNN Advisory Committee; derived from NSW Neonatal Intensive Care Units Data Collection.
**DATE OF DEATH**

*ANZNN label:* ‘DiedDate’

*Admin status:* CURRENT 1/01/1994

*Version number:* 1

*Metadata type:* DATA ELEMENT

*Definition:* Date of death of the baby.

*Context:* High-risk babies admitted for intensive care

*Data type:* Numeric

*Field size:* Min. 10 Max. 10

*Format:* DD/MM/YYYY

*Data domain:* Valid date

*Verification rules:* Date must be ≥ date of birth. If died in hospital, must equal to date of discharge. Check if > 365 days.

*Related metadata:* Used in conjunction with "Died"

*Source organisation:* ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
POST MORTEM

**ANZNN label:** ‘Autopsy_’

**Admin status:** CURRENT 01/01/1994

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** A post mortem examination was performed. Post mortem X-ray or MRI should be excluded.

**Context:** High-risk babies admitted for intensive care

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**
- 0 No post mortem was performed
- -1 Yes, a post mortem was performed
- 99 Unknown

**Related metadata:** Variable name has changed from ‘Autopsy?’ to ‘Autopsy_’ from 01/01/2012.

Used in conjunction with “Died”

**Source organisation:** ANZNN Advisory Committee; derived from NSW Neonatal Intensive Care Units Data Collection.
**IMMEDIATE CAUSE OF DEATH**

**ANZNN label:** ‘Cause_Death1’, ‘Cause_Death2’, ‘Cause_Death3’, ‘Cause_Death4’

**Admin status:** CURRENT 01/01/1996

**Version number:** 2

**Metadata type:** DATA ELEMENT

**Definition:** Immediate cause of death described in morbid anatomical terms.

**Context:** High-risk babies admitted for intensive care

**Data type:** Character

**Field size:** Min. 10 Max. 100

**Format:** CCCCCC

**Data domain:** Unspecified free field representing the immediate cause of death.

**Guide for use:** Must be coded as “yes” for Died.

Multiple causes of death and ICD-10 codes should be recorded in a separate table where possible as outlined below.

<table>
<thead>
<tr>
<th>BabyCODE</th>
<th>CauseCode</th>
<th>Cause_Death</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Related metadata:** Used in conjunction with “Died”


Variable name has changed from ‘Cause Death’ to ‘Cause_Death’ from 01/01/2012.

**Source organisation:** ANZNN Advisory Committee.
DEATH DUE TO CONGENITAL MALFORMATION

ANZNN label: ‘CongAbnmDeath’

Admin status: CURRENT 01/01/1997
Version number: 1
Metadata type: DATA ELEMENT

Definition: The death of the baby may be directly attributed to a congenital malformation(s).

Context: High-risk babies admitted for intensive care

Data type: Numeric
Field size: Min. 1 Max. 2
Format: NN

Data domain:
0 No
-1 Yes, death is attributable to congenital malformation
99 Unknown

Guide for use: Must be coded as “yes” for Congenital malformation and “yes” for Died.

Verification rules: Congenital malformation must be listed in the congenital malformation field.

Related metadata: Variable name has changed from ‘CongAbnmDeath?’ to ‘CongAbnmDeath’ from 01/01/2012.

Used in conjunction with “Congenital malformation” and “Died”

Source organisation: ANZNN Advisory Committee.
TRANSFERRED TO ANOTHER HOSPITAL

**ANZNN label:** ‘T_fer_’

**Admin status:** CURRENT 01/01/1994

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** The baby was transferred to another hospital nursery before going home.

**Context:** High-risk babies admitted for intensive care. Analysis of transfer details is important for service planning.

**Data type:** Numeric

**Field size:** Min. 1 Max. 2

**Format:** NN

**Data domain:**

- 0  **No, never transferred**
- -1 **Yes, transferred**
- 99 **Unknown**

**Related metadata:** Variable name has changed from ‘T/fer?’ to ‘T_fer_’ from 01/01/2012.

**Source organisation:** ANZNN Advisory Committee; complies with the NSW Neonatal Intensive Care Units data collection.
**SPECIFY HOSPITAL OF TRANSFER**


**Admin status:** CURRENT 01/01/1994  
**Version number:** 1  
**Metadata type:** DATA ELEMENT

**Definition:** Specify the name of the hospital to which the baby was transferred. This is the hospital referred to in “date of transfer”.

**Context:** High-risk babies admitted for intensive care. This information is used to trace the progress of the baby and to monitor its movement so that her / his outcome can be noted. The type or level of hospital of transfer is important information re levels of care, and for service planning.

**Data type:** Character  
**Field size:** Min. 10 Max. 100  
**Format:** CCCCCC

**Data domain:** Free field representing the hospital of transfer.

**Guide for use:** Must be coded as “yes” for Transferred to another hospital. If the baby is transferred many times please record receiving hospital and date of each transfer. A separate table can be used for all transfers as outlined below, provided appropriate identifiers (BabyCODE) are included.

<table>
<thead>
<tr>
<th>BabyCODE</th>
<th>T_ferHosp (hospital of transfer)</th>
<th>T_ferDate (date of transfer)</th>
<th>NursLevel (level of transfer unit receiving baby)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Related metadata:** Variable name has changed from ‘T/ferHosp’ to ‘T_ferHosp’ from 01/01/2012.

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
LEVEL OF TRANSFER UNIT RECEIVING BABY

**ANZNN label:** ‘NursLevel1’, ‘NursLevel2’, ‘NursLevel3’, ‘NursLevel4’

**Admin status:** CURRENT 01/01/1994

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Specify the level of care of the hospital to which the baby was transferred. This is the hospital referred to in “specify hospital of transfer”.

**Context:** High-risk babies admitted for intensive care. This information is used to monitor the baby’s movement so that her / his outcome can be noted. The type of nursery or level of hospital of transfer is important information re levels of care, and for service planning.

**Data type:** Numeric

**Field size:** Min. 1 Max. 1

**Format:** N

**Data domain:**
1 Level I type of care
2 Level II type of care
3 Level III type of care (NICU or Children’s Hospital)

**Guide for use:** Must be coded as “yes” for Transferred to another hospital. If the baby is transferred many times, for example to another hospital for surgery and then back, or for specialist assessment, and then is transferred to a peripheral hospital record all transfers in the separate ‘transfer table’.

**Level I** care is for normal healthy term babies, some of whom may need short-term observation during the first few hours of life.

**Level II** care refers to a nursery that generally has babies born at 32-36 weeks gestation weighing around 1500 to 2500 grams at birth. It includes care for babies who require intravenous therapy or antibiotics, and/or those who are convalescing after intensive care, and/or those who need their heart rate or breathing monitored, and/or those who need short-term oxygen therapy.

**Level III** or intensive care refers to the care of newborn infants who require more specialised care and treatment. It includes most babies born at less than 32 weeks gestation or less than 1500 grams birth weight, and others who may require such interventions as intravenous feeding, and/or surgery, and/or cardiorespiratory monitoring for the management of apnoea or seizures, and/or require assisted ventilation, and/or supplemental oxygen over 40% or long-term oxygen.

**Related metadata:** Variable name has changed from ‘NursLevel’ to ‘NursLevel1’ from 01/01/2012.

**Source organisation:** ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.
## DATE OF TRANSFER

<table>
<thead>
<tr>
<th><strong>ANZNN label:</strong></th>
<th>‘T_ferDate1’, ‘T_ferDate2’, ‘T_ferDate3’, ‘T_ferDate4’</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Admin status:</strong></td>
<td>CURRENT 01/01/1994</td>
</tr>
<tr>
<td><strong>Version number:</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Metadata type:</strong></td>
<td>DATA ELEMENT</td>
</tr>
<tr>
<td><strong>Definition:</strong></td>
<td>Date on which a newborn baby completes an episode of care in the hospital of registration. Formal separation is the administrative process by which a hospital records the completion of treatment and/or care and accommodation of a patient.</td>
</tr>
<tr>
<td><strong>Context:</strong></td>
<td>High-risk babies admitted for intensive care. This information is used to trace the progress of the baby and to monitor its movement so that her / his outcome can be noted. Required to identify a period in which an inpatient or same-day episode occurred and for derivation of length of stay.</td>
</tr>
<tr>
<td><strong>Data type:</strong></td>
<td>Numeric</td>
</tr>
<tr>
<td><strong>Field size:</strong></td>
<td>Min. 10 Max. 10</td>
</tr>
<tr>
<td><strong>Format:</strong></td>
<td>DD/MM/YYYY</td>
</tr>
<tr>
<td><strong>Data domain:</strong></td>
<td>Valid dates</td>
</tr>
<tr>
<td><strong>Guide for use:</strong></td>
<td>Date must be ≥ date of birth. Please include all transfers.</td>
</tr>
<tr>
<td><strong>Verification rules:</strong></td>
<td>Must be ≥ Date of birth. Check if &gt; 365 days.</td>
</tr>
<tr>
<td><strong>Related metadata:</strong></td>
<td>Variable name has changed from ‘T/ferDate’ to ‘T_ferDate’ from 01/01/2012.</td>
</tr>
<tr>
<td><strong>Source organisation:</strong></td>
<td>ANZNN Advisory Committee; complies with NSW Neonatal Intensive Care Units Data Collection.</td>
</tr>
</tbody>
</table>
**DISCHARGE DATE**

**ANZNN label:** 'HomeDate'

**Admin status:** CURRENT 01/01/1994

**Version number:** 1

**Metadata type:** DATA ELEMENT

**Definition:** Date on which an admitted patient completes an episode of care and is discharged to home.

**Context:** High-risk babies admitted for intensive care. Required to identify period in which an admitted patient hospital stay or episode occurred and for derivation of length of stay.

**Data type:** Numeric

**Field size:** Min. 10 Max. 10

**Format:** DD/MM/YYYY

**Data domain:** Valid date

**Verification rules:** Must be ≥ Date of birth. Check if > 365 days.

**Source organisation:** National Health Data Dictionary Version 9.0.

**Comment:** All data collection ceases when the baby is discharged to home.
APPENDICES
## APPENDIX A: MINOR CONGENITAL ANOMALIES
(TO BE EXCLUDED)

<table>
<thead>
<tr>
<th>Skin</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessory nipple</td>
<td></td>
</tr>
<tr>
<td>Benign skin neoplasms</td>
<td></td>
</tr>
<tr>
<td>Birth mark</td>
<td></td>
</tr>
<tr>
<td>Cafe au lait spots</td>
<td></td>
</tr>
<tr>
<td>Cutis marmorata</td>
<td></td>
</tr>
<tr>
<td>Lanugo excessive or persistent</td>
<td></td>
</tr>
<tr>
<td>Mongolian spots</td>
<td></td>
</tr>
<tr>
<td>Nevus flammeus</td>
<td></td>
</tr>
<tr>
<td>Non cavernous, single small haemangioma</td>
<td></td>
</tr>
<tr>
<td>Pilonidal or sacral dimple</td>
<td></td>
</tr>
<tr>
<td>Scalp defects, cutis aplasia</td>
<td></td>
</tr>
<tr>
<td>Skin cysts</td>
<td></td>
</tr>
<tr>
<td>Skull</td>
<td></td>
</tr>
<tr>
<td>Brachycephaly, dolicephaly, plagiocephaly</td>
<td></td>
</tr>
<tr>
<td>Craiotabes</td>
<td></td>
</tr>
<tr>
<td>Face</td>
<td></td>
</tr>
<tr>
<td>Facial asymmetry</td>
<td></td>
</tr>
<tr>
<td>Facial palsy</td>
<td></td>
</tr>
<tr>
<td>Flat or wide nasal bridge</td>
<td></td>
</tr>
<tr>
<td>Head asymmetry</td>
<td></td>
</tr>
<tr>
<td>Large, small or absent fontanelles</td>
<td></td>
</tr>
<tr>
<td>Macrocephaly</td>
<td></td>
</tr>
<tr>
<td>Micrognathia</td>
<td></td>
</tr>
<tr>
<td>Minor nose malformation</td>
<td></td>
</tr>
<tr>
<td>Upturned nose</td>
<td></td>
</tr>
<tr>
<td>Mouth, tongue &amp; palate</td>
<td></td>
</tr>
<tr>
<td>Bifid uvula</td>
<td></td>
</tr>
<tr>
<td>Big, wide or small lips</td>
<td></td>
</tr>
<tr>
<td>Cleft palate</td>
<td></td>
</tr>
<tr>
<td>High-arched palate</td>
<td></td>
</tr>
<tr>
<td>Macroglossia</td>
<td></td>
</tr>
<tr>
<td>Microglossia</td>
<td></td>
</tr>
<tr>
<td>Natal teeth</td>
<td></td>
</tr>
<tr>
<td>Ranula</td>
<td></td>
</tr>
<tr>
<td>Tongue cyst</td>
<td></td>
</tr>
<tr>
<td>Tongue-tie</td>
<td></td>
</tr>
<tr>
<td>Ears</td>
<td></td>
</tr>
<tr>
<td>Bat, cauliflower, elfin, lop ears</td>
<td></td>
</tr>
<tr>
<td>Darwin’s tubercle</td>
<td></td>
</tr>
<tr>
<td>Ear tags</td>
<td></td>
</tr>
<tr>
<td>Macrotia</td>
<td></td>
</tr>
<tr>
<td>Pointed, posteriorly rotated or low-set ears</td>
<td></td>
</tr>
<tr>
<td>Preauricular sinus, cyst or pit</td>
<td></td>
</tr>
<tr>
<td>Eyes</td>
<td>Blue sclera</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td></td>
<td>Brushfield spots</td>
</tr>
<tr>
<td></td>
<td>Epicanthal folds</td>
</tr>
<tr>
<td></td>
<td>Esotropia, exotrophia strabismus</td>
</tr>
<tr>
<td></td>
<td>Eye slant (upward / downward)</td>
</tr>
<tr>
<td></td>
<td>Narrow palpebral fissures</td>
</tr>
<tr>
<td></td>
<td>Nasolacrimal duct obstruction / dacryostenosis</td>
</tr>
<tr>
<td></td>
<td>Nystagmus</td>
</tr>
<tr>
<td>Neck</td>
<td>Brachial cleft or sinus</td>
</tr>
<tr>
<td></td>
<td>Redundant neck skin folds</td>
</tr>
<tr>
<td></td>
<td>Short neck</td>
</tr>
<tr>
<td></td>
<td>Webbing of neck</td>
</tr>
<tr>
<td>Cardiovascular system</td>
<td>Cardiomegaly</td>
</tr>
<tr>
<td></td>
<td>Dextroposition of the heart</td>
</tr>
<tr>
<td></td>
<td>Foramen ovale (GA &lt; 37 weeks or BW &lt; 1500g)</td>
</tr>
<tr>
<td></td>
<td>Heart block</td>
</tr>
<tr>
<td></td>
<td>Mild, trivial or physiological valvular regurgitation</td>
</tr>
<tr>
<td></td>
<td>Patent ductus arteriosis (GA &lt; 37 weeks or BW &lt; 1500g)</td>
</tr>
<tr>
<td></td>
<td>Persistent fetal circulation</td>
</tr>
<tr>
<td></td>
<td>Single umbilical artery</td>
</tr>
<tr>
<td>Urogenital system</td>
<td>Chordee</td>
</tr>
<tr>
<td></td>
<td>Cyst of vagina, canal of Nuck or ovary</td>
</tr>
<tr>
<td></td>
<td>Ectopic kidney</td>
</tr>
<tr>
<td></td>
<td>Fusion of vulva</td>
</tr>
<tr>
<td></td>
<td>Hydrocele</td>
</tr>
<tr>
<td></td>
<td>Imperforate hymen</td>
</tr>
<tr>
<td></td>
<td>Patent urachus or urachal cyst</td>
</tr>
<tr>
<td></td>
<td>Prominent clitoris</td>
</tr>
<tr>
<td></td>
<td>Small penis</td>
</tr>
<tr>
<td></td>
<td>Undescended testes (GA&lt;37 wks / BW &lt;2500 g)</td>
</tr>
<tr>
<td></td>
<td>Vaginal or hymenal tags</td>
</tr>
<tr>
<td>Gastrointestinal system</td>
<td>Hepatomegaly</td>
</tr>
<tr>
<td></td>
<td>Splenomegaly</td>
</tr>
<tr>
<td></td>
<td>Merkel's diverticulum</td>
</tr>
<tr>
<td></td>
<td>Anal tags, Anal or rectal fissures</td>
</tr>
<tr>
<td></td>
<td>Inguinal hernia in males</td>
</tr>
<tr>
<td></td>
<td>Inguinal hernia female (BW&lt; 2500g)</td>
</tr>
<tr>
<td></td>
<td>Umbilical hernia (skin covered)</td>
</tr>
<tr>
<td>Respiratory system</td>
<td>Hypoplastic lungs (GA &lt;37wks)</td>
</tr>
<tr>
<td></td>
<td>Laryngeal stridor</td>
</tr>
<tr>
<td></td>
<td>Laryngomalacia</td>
</tr>
</tbody>
</table>
Appendix A: Minor congenital anomalies

<table>
<thead>
<tr>
<th>Limbs</th>
<th>Other conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brachydactyly, unspecified</td>
<td>Balanced autosomal translocations</td>
</tr>
<tr>
<td>Camptodactyly</td>
<td>Birth injuries</td>
</tr>
<tr>
<td>Cervical rib, other extra ribs</td>
<td>Cephalhaemotoma</td>
</tr>
<tr>
<td>Clinodactyly</td>
<td>Cystic fibrosis</td>
</tr>
<tr>
<td>Dislocation or subluxation of knee</td>
<td>Enzyme deficiencies</td>
</tr>
<tr>
<td>Enlarged or hypertrophic nails</td>
<td>Hydrops fetalis</td>
</tr>
<tr>
<td>Flexion deformity of digits</td>
<td>Meconium ileus</td>
</tr>
<tr>
<td>Genu valgum, varum /recurvatum</td>
<td>Metabolic disorder</td>
</tr>
<tr>
<td>Hallux valgus</td>
<td>Pyloric stenosis</td>
</tr>
<tr>
<td>Hallux varus</td>
<td>Sternomastoid tumour</td>
</tr>
<tr>
<td>Hip subluxation, clicky hips</td>
<td>Torticollis</td>
</tr>
<tr>
<td>Long fingers and toes</td>
<td>Volvulus</td>
</tr>
<tr>
<td>Nail hypoplasia</td>
<td></td>
</tr>
<tr>
<td>Overlapping toes</td>
<td></td>
</tr>
<tr>
<td>Partial syndactyly of toe, webbing of toe</td>
<td></td>
</tr>
<tr>
<td>Rocker-bottom feet</td>
<td></td>
</tr>
<tr>
<td>Simian or Sydney lines, abnormal palmar creases</td>
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<td>Skin tags on hands and feet</td>
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<td>Talipes calcaneovalgus or equinovarus</td>
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<td>Tibial torsion or bowing</td>
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<td>Widely spaced 1st and 2nd toes</td>
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</table>
APPENDIX B: CONCEPTS USED

Birth weight

Admin status: CURRENT 01/01/1997
Version number: 1
Metadata type: DATA ELEMENT CONCEPT

Definition: The first weight of the foetus or baby obtained after birth.
The World Health Organisation further defines the following categories:
- Extremely low birth weight: < 1000 grams (up to and including 999 g)
- Very low birth weight: < 1500 grams (up to and including 1499 g).
- Low birth weight: < 2500 grams (up to and including 2499 g).

Context: Perinatal

Source organisation: National Perinatal Data Development Committee.
Comments: The definitions of 'low', 'very low' and 'extremely low' birth weight do not constitute exclusive categories. Below the set limits they are all-inclusive and therefore overlap (i.e. low includes very low and extremely low; while very low includes extremely low).
For live births, birth weight should preferably be measured within the first hour of life before significant postnatal weight loss has occurred. While statistical tabulations include 500g groupings for birth weight, weights should not be recorded in those groupings. The actual weight should be recorded to the degree of accuracy to which it is measured.

Gestational age

Admin status: CURRENT 01/01/1997
Version number: 1
Metadata type: DATA ELEMENT CONCEPT

Definition: The duration of gestation is measured from the first day of the last normal menstrual period. Gestational age is expressed in completed days or weeks (e.g. events occurring 280 to 286 completed days after the onset of the last normal menstrual period are considered to have occurred at 40 weeks of gestation).
WHO defines the following categories:

Preterm: Less than 37 completed weeks (less than 259 days) of gestation.
Term: From 37 completed weeks to less than 42 completed weeks (259 to 293 days) of gestation.
Post-term: 42 completed weeks or more (294 days or more) of gestation.

**Context:**  Perinatal

**Related metadata:**  Relates to Gestational age, version 1

**Source document:**  International Classification of Diseases and Related Health Problems, 10th Revision, WHO, 1992.

**Source organisation:**  National Perinatal Data Development Committee.

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**Live birth**

**Admin status:**  CURRENT  01/01/1997

**Version number:**  1

**Metadata type:**  DATA ELEMENT CONCEPT

**Definition:**  A live birth is defined by the World Health Organisation to be the complete expulsion or extraction from the mother of a product of conception, irrespective of the duration of the pregnancy which, after such separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of the voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered live born.

**Context:**  Perinatal

**Source document:**  International Classification of Diseases and Related Health Problems, 10th Revision, Vol. 1, WHO, 1992

**Source organisation:**  National Health Data Committee, National Perinatal Data Development Committee.
**Intensive care unit**

**Admin status:** CURRENT 01/01/1997  
**Version number:** 1  
**Metadata type:** DATA ELEMENT CONCEPT  

**Definition:** An intensive care unit (ICU) is a designated ward of a hospital which is specially staffed and equipped to provide observation, care and treatment to patients with actual or potential life-threatening illnesses, injuries or complications, from which recovery is possible. The ICU provides special expertise and facilities for the support of vital functions and utilizes the skills of medical, nursing and other staff trained and experienced in the management of these problems.

**Context:** Admitted patient care

**Comments:** There are five different types and levels of ICU defined according to three main criteria: the nature of the facility, the care process and the clinical standards and staffing requirements. All levels and types of ICU must be separate and self-contained facilities in hospitals and, for clinical standards and staffing requirements, substantially conform to relevant guidelines of the Australian Council on Healthcare Standards. The five types of ICU are briefly described below:

*Neonatal intensive care unit, level 3:* must be capable of providing complex, multisystem life support for an indefinite period. It must be capable of providing mechanical ventilation and invasive cardiovascular monitoring; or care of a similar nature.

**Source organisation:** National Intensive Care Working Group
APPENDIX C: ICD CODES FOR COMMON SURGICAL PROCEDURES

This list is a guide only; please refer to the relevant resources for further descriptions, exclusions and additional procedure codes.

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<th>Block Code</th>
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<td>Insertion of ventriculoperitoneal shunt</td>
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<td>Creation of systemic pulmonary shunt</td>
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<td>Delayed primary closure of exomphalos following creation of prosthetic pouch</td>
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