

# MALAYSIAN NATIONAL NEONATAL REGISTRY (CRF 2018)

Centre Name: _____	<input type="radio"/> New Case <input type="radio"/> Readmission <input type="radio"/> Transfer from another SDP Hospital or IJN: _____	MNR No. (Office use): <input style="width: 40px;" type="text"/> / <input style="width: 40px;" type="text"/> Centre: <input style="width: 40px;" type="text"/>
Date of Admission: <input style="width: 30px;" type="text"/> / <input style="width: 30px;" type="text"/> / <input style="width: 30px;" type="text"/> (dd/mm/yy)	Admitted to neonatal ward: <input type="radio"/> Yes → (Proceed to complete ALL sections in this CRF) <input type="radio"/> No → (Proceed to complete Section 1,2 [without No.28], 4[No.47 only] and 5)	
<input type="checkbox"/> Abandoned baby → (if this box is ticked, item No. 1, No. 4a, No. 6 to No. 16 are not mandatory)		
Instruction: Where check boxes <input type="checkbox"/> are provided, ticked (✓) one or more boxes. Where radio buttons <input type="radio"/> are provided, ticked (✓) one box only.		

## SECTION 1 : PATIENT PARTICULARS & MATERNAL HISTORY

*1. Name of mother:	_____		
*2. Name of baby (Optional):	_____		
*3. RN of baby:	_____		
*4a. Mother's I/C number:	MyKad: <input style="width: 40px;" type="text"/> - <input style="width: 20px;" type="text"/> - <input style="width: 40px;" type="text"/>	Other ID document No: <input style="width: 80%; border: 1px solid black;" type="text"/>	
	Specify document type (if others): <input type="radio"/> Passport <input type="radio"/> Armed Force ID <input type="radio"/> Driver's License <input type="radio"/> Old IC <input type="radio"/> Hospital RN <input type="radio"/> Father's I/C <input type="radio"/> Work Permit number <input type="radio"/> Police ID Card <input type="radio"/> Immigration permit <input type="radio"/> Other, specify:.....		
*4b. Baby's MyKid number:	<input style="width: 40px;" type="text"/> - <input style="width: 20px;" type="text"/> - <input style="width: 40px;" type="text"/>		
*5a. Date of birth of baby: (dd/mm/yy)	<input style="width: 20px;" type="text"/> / <input style="width: 20px;" type="text"/> / <input style="width: 20px;" type="text"/>	*5b. Time of birth: (24 hour format. Enter the best estimated time of birth if the exact time unknown)	<input style="width: 40px;" type="text"/>
*6. Ethnic group of Mother:	<input type="radio"/> Malay <input type="radio"/> Indian <input type="radio"/> Bumiputra Sabah, specify:..... <input type="radio"/> Other, Malaysian <input type="radio"/> Chinese <input type="radio"/> Orang Asli <input type="radio"/> Bumiputra Sarawak, specify:..... <input type="radio"/> Non-citizen, specify country .....		
*7. Maternal age:	<input style="width: 20px;" type="text"/>		
*8. GPA: (current pregnancy before delivery of this child)	*Gravida: <input style="width: 20px;" type="text"/>	*Parity: <input style="width: 20px;" type="text"/>	*Abortion: <input style="width: 20px;" type="text"/>
*9. Maternal diabetes (including gestational diabetes):	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown		
*10. Maternal hypertension, chronic pregnancy included:	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown		
*11. Maternal Eclampsia:	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown		
*12. Maternal Chorioamnionitis:	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown		
*13. Maternal Anaemia: (<11g/dL)	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown		
*14. Maternal abruption placenta:	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown		
*15. Maternal bleeding placenta praevia:	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown		
*16. Cord prolapse:	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown		

## SECTION 2 : BIRTH HISTORY

*17. Antenatal Steroid:	<input type="radio"/> Yes → <input checked="" type="radio"/> 1 dose <input type="radio"/> 2 doses <input type="radio"/> No <input type="radio"/> Unknown		
*18. Intrapartum antibiotic:	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown		
*19. Birth weight:	<input style="width: 40px;" type="text"/> (grams)		
*20a. Gestation:	<input style="width: 20px;" type="text"/> (weeks)	*20b. Gestational age based on: (if patient died)	<input type="radio"/> LMP <input type="radio"/> Ultrasound <input type="radio"/> Ballard Score <input type="radio"/> Unknown
*21. Growth status:	<input type="radio"/> SGA <input type="radio"/> AGA <input type="radio"/> LGA		
*22. Gender:	<input type="radio"/> Male <input type="radio"/> Female <input type="radio"/> Ambiguous / Indeterminate		
*23. Place of birth:	<input type="radio"/> Inborn <input type="radio"/> Home <input type="radio"/> Health Clinic <input type="radio"/> Private Hospital <input type="radio"/> Government hospital with specialist <input type="radio"/> District <input type="radio"/> General <input type="radio"/> Government hospital without specialist <input type="radio"/> Outborn → <input type="radio"/> University hospital <input type="radio"/> Enroute / during transport <input type="radio"/> Maternity home with specialist <input type="radio"/> Maternity home without specialist <input type="radio"/> Alternative Birthing centre (ABC) <input type="radio"/> Urban <input type="radio"/> Rural <input type="radio"/> Others / specify ..... <input type="radio"/> Unknown		
*24. Multiplicity:	<input type="radio"/> Singleton <input type="radio"/> Twin <input type="radio"/> Triplet <input type="radio"/> Other, specify: .....		Specify birth order if not a singleton: <input style="width: 20px;" type="text"/>
*25. Final Mode of delivery:	<input type="radio"/> Vaginal delivery → <input checked="" type="radio"/> SVD <input type="radio"/> Breech <input type="radio"/> Caesarean section → <input type="radio"/> Elective <input type="radio"/> Emergency <input type="radio"/> Instrumental → <input type="checkbox"/> Vacuum <input type="checkbox"/> Forceps <input type="radio"/> Others, specify:..... <input type="radio"/> Unknown		

## SECTION 2 : BIRTH HISTORY (continue)

<b>*26. Apgar score at 1 min and 5 min (0-10)</b>	a) Score at 1 min: <input type="text"/> <input type="checkbox"/> Unknown	b) Score at 5 min: (Please score even if the baby is intubated) <input type="text"/> <input type="checkbox"/> Unknown
27. Initial resuscitation: (applicable for inborn only)	a) Oxygen: <input type="radio"/> Yes <input type="radio"/> No	d) Endotracheal tube vent: <input type="radio"/> Yes <input type="radio"/> No
	b) Early CPAP: <input type="radio"/> Yes <input type="radio"/> No	e) Cardiac compression: <input type="radio"/> Yes <input type="radio"/> No
	c) Bag and mask ventilation: <input type="radio"/> Yes <input type="radio"/> No	f) Adrenaline: <input type="radio"/> Yes <input type="radio"/> No
*28. a) Plastic wrap at birth (for < 1000 gm)	<input type="radio"/> Yes <input type="radio"/> No	
b) If yes : was baby wrapped without drying at birth	<input type="radio"/> Yes <input type="radio"/> No	
c) Admission temperature (mandatory if admitted to Neonatal ward)	<input type="text"/> . <input type="text"/> (°C)	

## SECTION 3 : NEONATAL EVENT

<b>*29. Respiratory support:</b> If < 12 hours = state 0.5 days If > 12 to 24 hours = state 1 day If > 24 hours = state to next completed days Complete entry a) to d) for each type of respiratory support given	<input type="radio"/> Yes →  <input type="radio"/> No	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">a) CPAP done?</td> <td><input type="radio"/> Yes <input type="radio"/> No</td> </tr> <tr> <td style="padding-left: 20px;">i) Total duration of CPAP at your centre:</td> <td><input type="text"/> . <input type="text"/> Day (s)</td> </tr> <tr> <td>b) High flow nasal cannula (HFNC):</td> <td><input type="radio"/> Yes <input type="radio"/> No</td> </tr> <tr> <td style="padding-left: 20px;">i) Total duration of HFNC at your centre</td> <td><input type="text"/> . <input type="text"/> Day (s)</td> </tr> <tr> <td>c) Conventional ventilation:</td> <td><input type="radio"/> Yes <input type="radio"/> No</td> </tr> <tr> <td style="padding-left: 20px;">i) Total duration of Conventional ventilation at your centre:</td> <td><input type="text"/> . <input type="text"/> Day (s)</td> </tr> <tr> <td>d) HFJV/HFOV:</td> <td><input type="radio"/> Yes <input type="radio"/> No</td> </tr> <tr> <td style="padding-left: 20px;">i) Total duration of HFJV//HFOV at your centre:</td> <td><input type="text"/> . <input type="text"/> Day (s)</td> </tr> <tr> <td>e) Nitric Oxide:</td> <td><input type="radio"/> Yes <input type="radio"/> No</td> </tr> <tr> <td style="padding-left: 20px;">i) Total duration of Nitric Oxide at your centre:</td> <td><input type="text"/> . <input type="text"/> Day (s)</td> </tr> </table>	a) CPAP done?	<input type="radio"/> Yes <input type="radio"/> No	i) Total duration of CPAP at your centre:	<input type="text"/> . <input type="text"/> Day (s)	b) High flow nasal cannula (HFNC):	<input type="radio"/> Yes <input type="radio"/> No	i) Total duration of HFNC at your centre	<input type="text"/> . <input type="text"/> Day (s)	c) Conventional ventilation:	<input type="radio"/> Yes <input type="radio"/> No	i) Total duration of Conventional ventilation at your centre:	<input type="text"/> . <input type="text"/> Day (s)	d) HFJV/HFOV:	<input type="radio"/> Yes <input type="radio"/> No	i) Total duration of HFJV//HFOV at your centre:	<input type="text"/> . <input type="text"/> Day (s)	e) Nitric Oxide:	<input type="radio"/> Yes <input type="radio"/> No	i) Total duration of Nitric Oxide at your centre:	<input type="text"/> . <input type="text"/> Day (s)
a) CPAP done?	<input type="radio"/> Yes <input type="radio"/> No																					
i) Total duration of CPAP at your centre:	<input type="text"/> . <input type="text"/> Day (s)																					
b) High flow nasal cannula (HFNC):	<input type="radio"/> Yes <input type="radio"/> No																					
i) Total duration of HFNC at your centre	<input type="text"/> . <input type="text"/> Day (s)																					
c) Conventional ventilation:	<input type="radio"/> Yes <input type="radio"/> No																					
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i) Total duration of HFJV//HFOV at your centre:	<input type="text"/> . <input type="text"/> Day (s)																					
e) Nitric Oxide:	<input type="radio"/> Yes <input type="radio"/> No																					
i) Total duration of Nitric Oxide at your centre:	<input type="text"/> . <input type="text"/> Day (s)																					
*30. Total number of days on ventilation support at your centre:	<input type="text"/> . <input type="text"/> (autocalculate)																					
*31. Surfactant:	<input type="radio"/> Yes → <input type="radio"/> < 1 hr <input type="radio"/> 1-2 hr <input type="radio"/> > 2 hr <input type="radio"/> No																					
*32. Parenteral nutrition:	<input type="radio"/> Yes <input type="radio"/> No																					

## SECTION 4: PROBLEMS/DIAGNOSES

33. Respiratory:	<input type="checkbox"/> Meconium aspiration syndrome <input type="checkbox"/> Pulmonary haemorrhage <input type="checkbox"/> Congenital pneumonia <input type="checkbox"/> Community acquired pneumonia <input type="checkbox"/> Transient tachypnoea of newborn <input type="checkbox"/> Pulmonary interstitial emphysema <input type="checkbox"/> Nosocomial pneumonia					
*34. RDS:	<input type="radio"/> Yes <input type="radio"/> No					
*35. Pneumothorax:	<input type="radio"/> Yes → <b>Pneumothorax developed during:</b> <input type="radio"/> Spontaneous <input type="radio"/> CPAP <input type="radio"/> CMV <input type="radio"/> HFV <input type="radio"/> No					
*36. Supplemental oxygen and BPD:	a) Is baby on > 21% oxygen continuously for 28 days or more? <input type="radio"/> Yes <input type="radio"/> No					
	b) If Yes		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">(i) for &lt; 32 weeks GA, baby still on oxygen, CPAP or other forms of respiratory at 36 weeks</td> <td><input type="radio"/> Yes <input type="radio"/> No</td> </tr> <tr> <td>(ii) for &gt;= 32 weeks GA, baby still on oxygen, CPAP or other forms of respiratory support at day 56</td> <td><input type="radio"/> Yes <input type="radio"/> No</td> </tr> </table>	(i) for < 32 weeks GA, baby still on oxygen, CPAP or other forms of respiratory at 36 weeks	<input type="radio"/> Yes <input type="radio"/> No	(ii) for >= 32 weeks GA, baby still on oxygen, CPAP or other forms of respiratory support at day 56
(i) for < 32 weeks GA, baby still on oxygen, CPAP or other forms of respiratory at 36 weeks	<input type="radio"/> Yes <input type="radio"/> No					
(ii) for >= 32 weeks GA, baby still on oxygen, CPAP or other forms of respiratory support at day 56	<input type="radio"/> Yes <input type="radio"/> No					
*37. CVS :	*37a. PPHN :	<input type="radio"/> Yes <input type="radio"/> No				
		*37b. Heart Failure : <input type="radio"/> Yes <input type="radio"/> No				
*38. PDA:	<input type="radio"/> Yes → a) ECHO done: <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> No b) Pharmacological closure: <input type="radio"/> Yes <input type="radio"/> No If Yes then to choose <input type="checkbox"/> Indomethacin <input type="checkbox"/> Ibuprofen <input type="checkbox"/> Paracetamol c) Ligation: <input type="radio"/> Yes <input type="radio"/> No					
	*39. NEC (stage 2 and above):	a) surgical treatment: <input type="radio"/> Yes <input type="radio"/> No				
		b) NEC present before admission to your centre: (for outborn baby only) <input type="radio"/> Yes <input type="radio"/> No				
*40. ROP Retinal Exam Done  < 32 weeks OR ≤ 1500g - option 'Not Applicable' will be auto blocked  ≥ 32 weeks AND >1500g; option 'Yes' & 'No' will be auto blocked	<input type="radio"/> Yes → a) Date of first screening: <input type="text"/> / <input type="text"/> / <input type="text"/> (If yes, worst stage of ROP): b) Post conceptional age at 1st screening: <input type="text"/> (autocalculate)					
	c) <input type="radio"/> No ROP <input type="radio"/> Stage 1 <input type="radio"/> Prethresh <input type="radio"/> Thresh <input type="radio"/> Stage 4 <input type="radio"/> Stage 5 <input type="checkbox"/> PLUS disease					
	d) Laser Therapy: <input type="radio"/> Yes <input type="radio"/> No					
	e) Cryotherapy: <input type="radio"/> Yes <input type="radio"/> No					
	f) Vitrectomy/AntiVEGF: <input type="radio"/> Yes <input type="radio"/> No					
	g) ROP present prior to admission? (for outborn baby only) <input type="radio"/> Yes <input type="radio"/> No					
	<input type="radio"/> No → Appointment given: <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Not Applicable		Date of appointment: <input type="text"/> / <input type="text"/> / <input type="text"/>			

**SECTION 4: PROBLEMS/DIAGNOSES (continue)**

**\*41. IVH:**  
 < 37 weeks - option 'Not Applicable' will be auto blocked

Yes If yes, worst grade: →  Grade 1  Grade 2  Grade 3  Grade 4

No

Not applicable (term infant)

Ultrasound not done

VP shunt/ reservoir insertion

**\*42a. Central Venous Line**  
 (applies to the catheter in situ for the longest duration)

i.  Yes  No

ii. Date of insertion:  /  /

Date of removal:  /  /

Duration of central line (autocalculate) : \_\_\_\_\_ days

**\*42. CLABSI:**  Yes  No

**\*43. Confirmed sepsis:**  
 (Blood culture positive only)

Yes  No

≤ 72 hours of life

**II) Type of organism:** (can tick more than one)

Group B Streptococcus  Staphylococcus aureus  Acinetobacter  ESBL organisms

MRSA  Klebsiella  Fungal  E.Coli

CONS  Pseudomonas  Serratia  Others, specify: .....

---

> 72 hours of life

**II) Type of organism:** (can tick more than one)

Group B Streptococcus  Staphylococcus aureus  Acinetobacter  ESBL organisms

MRSA  Klebsiella  Fungal  E.Coli

CONS  Pseudomonas  Serratia  Others, specify: .....

**\*44. Neonatal meningitis:**

Yes  No

**CSF Culture positive :**  Yes  No

**II) If Yes, type of organism:** (can tick more than one)

Group B Streptococcus  Staphylococcus aureus  Acinetobacter  ESBL organisms

MRSA  Klebsiella  Fungal  E.Coli

CONS  Pseudomonas  Others, specify: .....

**\*45. HIE:**  
 (Only for ≥ 35 weeks GA)

**a) HIE severity**  None  Mild  Moderate  Severe

**b) Highest Thompson:**

**c) Cooling therapy:**  Yes  No

If Yes; then to choose

Cooling blanket or cap

Passive cooling ± gel pack

Both

**d) Seizures in HIE cases :**  Yes  No

**\*46. Congenital anomalies:**

**\*46a. Major congenital anomalies:**  Yes  No

Syndrome (known)

Down

Edward

Patau

Others, specify

(Refer to ICD 10):

Not a recognized syndrome

Isolated major abnormality

**\*46b. Types of abnormalities (check all that are present. Applies to all including 'known syndromes', 'not a recognized syndrome' or 'isolated major abnormality')**

CNS →  Hydrocephalus  Hydrancephaly  Holoprosencephaly  Others (Refer to ICD 10): \_\_\_\_\_

Neural Tube Defect →  Spina bifida  Anencephaly  Encephalocele  Others (Refer to ICD 10): \_\_\_\_\_

CVS → Please see (page 4)

Skeletal dysplasia

Respiratory

CDH

GIT

Hydrops

Renal

Others, specify (Refer to ICD10):

None of the above

**SECTION 4: PROBLEMS/DIAGNOSES (continue)**

46b.

CVS

- Duct dependent lesion →
  - TGA
  - TOF or PA with VSD
  - Pulmonary atresia (PA) with Intact ventricular septum
  - Complex cyanotic heart with PA
  - Critical PS
  - Hypoplastic left heart syndrome
  - Interrupted aortic arch
  - Coarctation of aorta
  - Critical AS
  
- Severe congenital heart (needs early intervention) →
  - TAPVD
  - Others
  
- Other significant lesions →
  - ASD
  - VSD
  - AVSD
  - PDA
  - Others ,specify .....

Date of echo diagnosis : Date done: \_\_\_/\_\_\_/\_\_\_ auto calculate age (days)

- Intervention →
- Nil done
  - Surgery Date done: \_\_\_/\_\_\_/\_\_\_ auto calculate age (days)
  - Catheterization Date done: \_\_\_/\_\_\_/\_\_\_ auto calculate age (days)

Name of procedure: \_\_\_\_\_

**SECTION 5: OUTCOME**

<b>*47a. Date of discharge / transfer/ death:</b> (dd/mm/yy)	<input type="text"/> / <input type="text"/> / <input type="text"/>	<b>47b. Time of Death:</b> (24 hour format) (mandatory for death cases)	<input type="text"/> : <input type="text"/> : <input type="text"/>	(enter the best estimated time of death if the exact time is unknown)
<b>*48. Weight and growth status on discharge:</b>	a) Weight:	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> (grams)		
	b) Growth status:	<input type="radio"/> SGA <input type="radio"/> AGA <input type="radio"/> LGA		
<b>49. Exclusive breastfeeding at discharge</b> ( Tick yes if > 72 hour before discharge)	<input type="radio"/> Yes <input type="radio"/> No			
<b>*50. Total duration of hospital stay (neonatal/ peads care):</b>	<input type="text"/> <input type="text"/> <input type="text"/> ( in completed days) (auto calculate)			
<b>*51. Outcome:</b>				

Alive →

**Place discharged to:**

- Home
- Social welfare home
- Other wards within hospital
- Still hospitalized as of 1st birthday
- Transfer to other hospitals

→

<b>a) Name of hospital:</b>			
<b>b) Reason for transfer:</b>	<input type="radio"/> Growth/ stepdown care	<input type="radio"/> Acute medical/ diagnostic services	<input type="radio"/> Social/ Logistic reason
	<input type="radio"/> Lack of NICU bed	<input type="radio"/> Surgery	<input type="radio"/> Other, specify: .....
	<input type="radio"/> Chronic/ Palliative care		
<b>c) Post transfer disposition:</b> (Please fill this section if place transferred is not part of the NNR Network)	<input type="radio"/> Home	<input type="radio"/> Transferred again to another hospital	<input type="radio"/> Death
	<input type="radio"/> In transit	<input type="radio"/> Readmitted to your hospital	<input type="radio"/> Still in ward

Dead →

**Place of death:**

- Labour room/OT
- In transit
- Neonatal unit
- Others, specify: .....

Name : \_\_\_\_\_ Signature: \_\_\_\_\_

Date:  /  /  (dd/mm/yy)

# MALAYSIAN NATIONAL NEONATAL REGISTRY

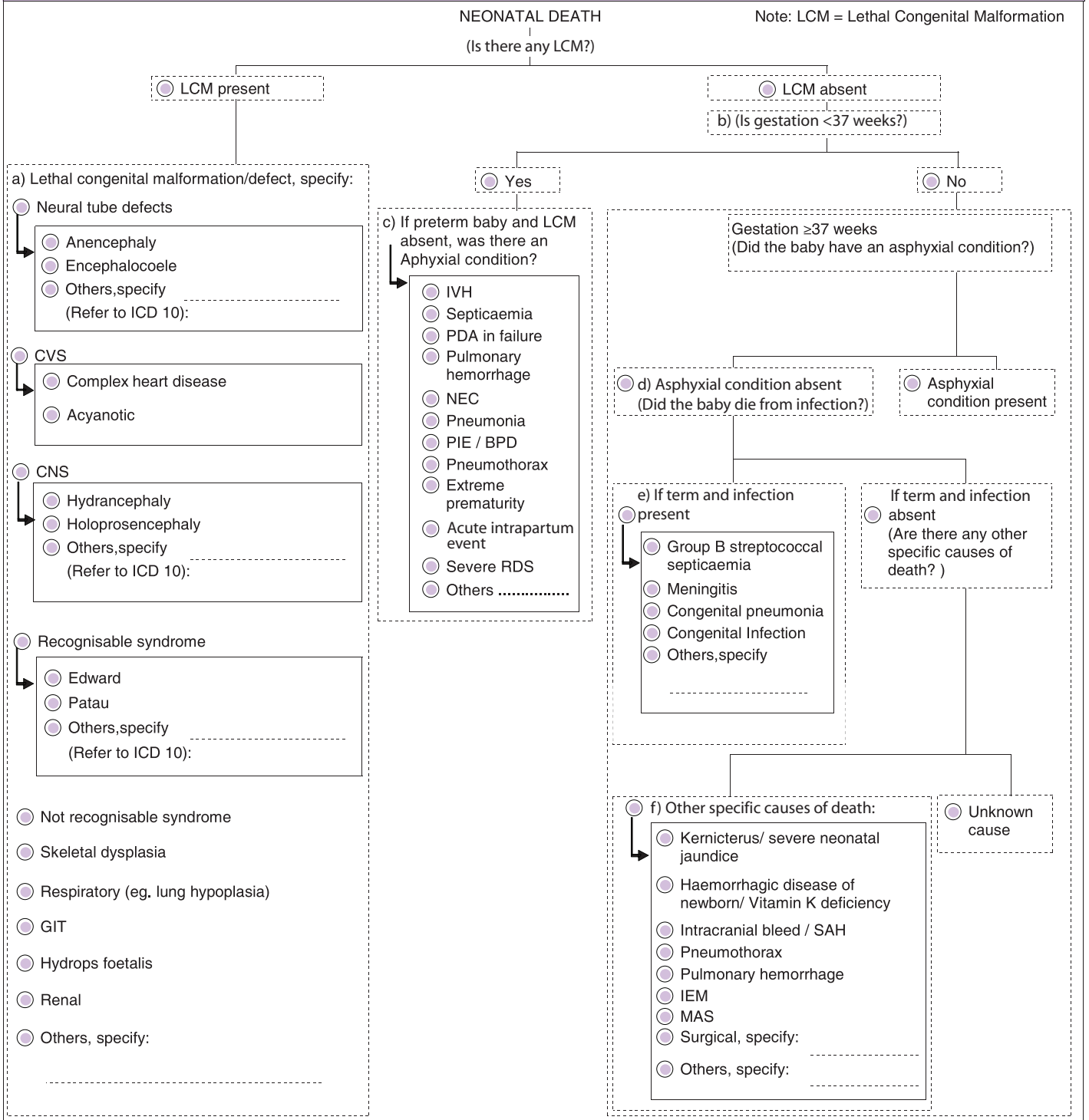
## Supplementary Form

**Instruction:**

- 1) For term babies please fill in according to the most pertinent underlying cause of death.  
 2) For preterm babies please fill in according to the most immediate cause of death.

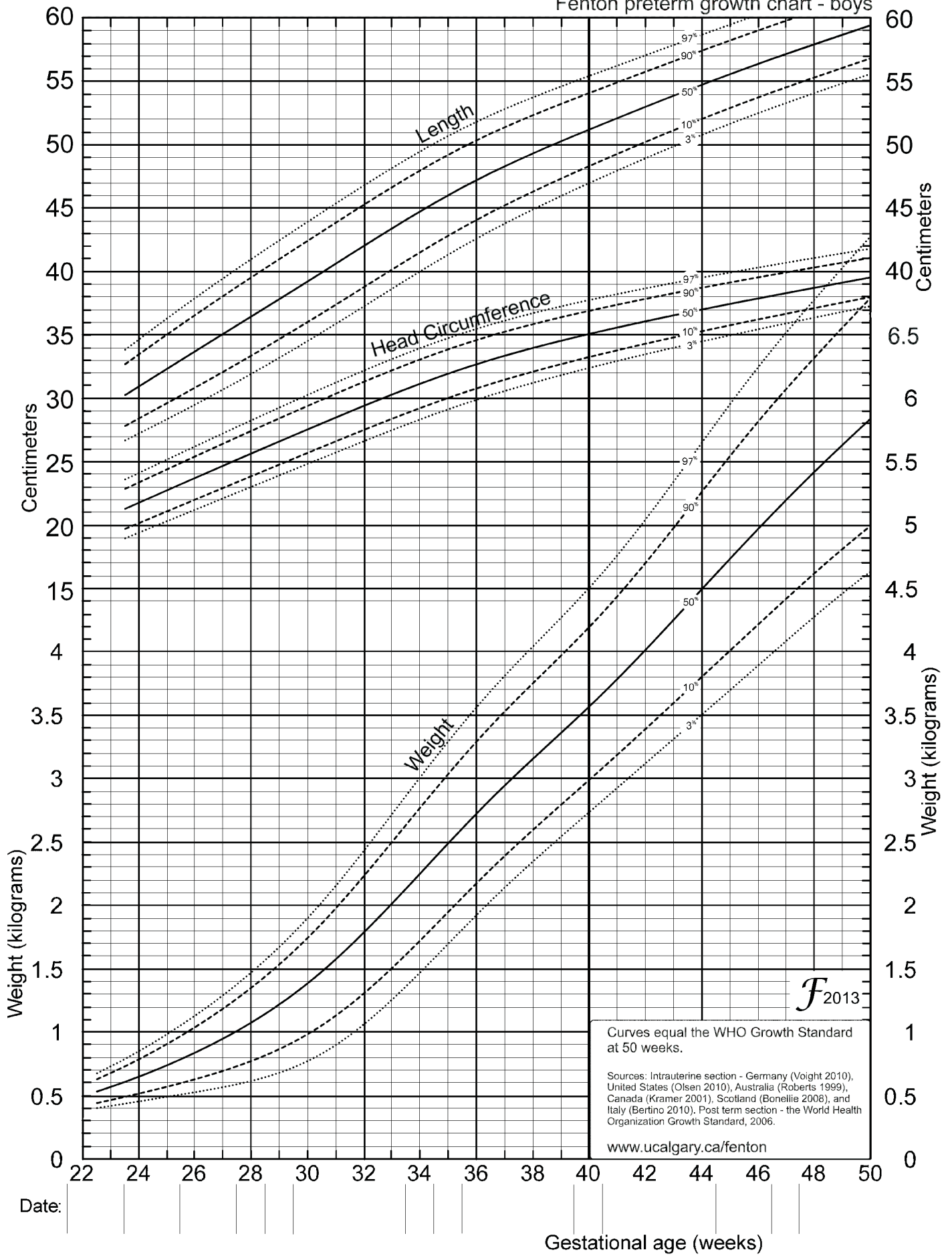
<b>1. Centre Name:</b>				<b>Office use:</b>		
<b>2. Name:</b>		<b>3. RN:</b>		<b>Centre:</b>		
<b>4. Mother's I/C Number:</b>	<b>New IC:</b>		<b>Passport:</b>			

**Immediate cause of death (Modified Wigglesworth):** Tick relevant button to reach correct classification



Name : \_\_\_\_\_ Signature : \_\_\_\_\_ Date:    (dd/mm/yy)

# Fenton preterm growth chart - boys



Fenton preterm growth chart - girls

