

MALAYSIAN NATIONAL NEONATAL REGISTRY (CRF 2021)

Centre Name: _____ Date of Admission: _____ (dd/mm/yy)	☐ New Case ☐ Readmission ☐ Transfer from another SDP Hospital or IJN: _____	MNNR No (Office use): _____ / _____ Centre: _____
Admitted to neonatal ward: ☐ Yes → (Proceed to complete ALL sections in this CRF) ☐ No → (Proceed to complete Section 1, 2 [without No.30], 4[No.47 only] and 5)		
☐ Abandoned baby → (if this box is ticked, item No.1, No.3a & 3b, No.5 to No.20 are not mandatory)		
Instruction: Where check boxes ☐ are provided, ticked (✓) one or more boxes. Where radio buttons ☐ are provided, ticked (✓) one box only.		
* RN of baby: _____		

SECTION 1 : PATIENT PARTICULARS & MATERNAL HISTORY

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

SECTION 2 : BIRTH HISTORY

* 18. Antenatal steroid:	☐ Yes → ☐ 1 dose ☐ 2 doses ☐ No ☐ Unknown		
* 19. Antenatal magnesium sulphate:	☐ Yes ☐ No ☐ Unknown		
* 20. Intrapartum antibiotic:	☐ Yes ☐ No ☐ Unknown		
* 21. Birth weight:	____ (gram)		
* 22. Gestation:	____ (weeks)		
* 23. Growth status:	☐ SGA ☐ AGA ☐ LGA		
* 24. Gender:	☐ Male ☐ Female ☐ Ambiguous / Indeterminate		
* 25. Place of birth:	☐ Inborn ☐ Outborn → ☐ Home ☐ Health Clinic ☐ Private Hospital ☐ Government hospital with specialist ☐ District ☐ General ☐ Government hospital without specialist ☐ University hospital ☐ Enroute / during transport ☐ Maternity home with specialist ☐ Maternity home without specialist ☐ Alternative Birthing centre (ABC) ☐ Urban ☐ Rural ☐ Others / specify: _____ ☐ Unknown		
* 26. Multiplicity:	☐ Singleton ☐ Twin ☐ Triplet ☐ Other, specify: _____ Specify birth order if not a singleton: ____		
* 27. Final Mode of delivery:	☐ Vaginal delivery → ☐ SVD ☐ Breech ☐ Instrumental → ☐ Vacuum ☐ Forceps ☐ Caesarean section → ☐ Elective ☐ Emergency ☐ Others, specify: _____ ☐ Unknown		

SECTION 2 : BIRTH HISTORY (continue)

* 28. Apgar score at 1 min and 5 min (0-10)	a) Score at 1 min:	☐ Unknown	b) Score at 5 min: (Please score even if the baby is intubated)	☐ Unknown
* 29. Initial resuscitation: (applicable for inborn only)	a) Oxygen:	☐ Yes ☐ No	d) Endotracheal tube vent:	☐ Yes ☐ No
	b) Early CPAP :	☐ Yes ☐ No	e) Cardiac compression:	☐ Yes ☐ No
	c) Bag and mask ventilation:	☐ Yes ☐ No	f) Adrenaline:	☐ Yes ☐ No
* 30. a) Plastic wrap at birth (for <1500 gm)	☐ Yes ☐ No			
b) If yes : was baby wrapped without drying at birth	☐ Yes ☐ No			
c) Admission temperature: (mandatory if admitted to Neonatal ward)	. (°C)			

SECTION 3: NEONATAL EVENT

* 31. Respiratory support: 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 e) for each type of respiratory support given	☐ Yes →	a) CPAP/bilevel CPAP	☐ Yes ☐ No	ii) Total duration of CPAP/bilevel CPAP at your centre:	. Day (s)
	☐ No	b) High flow nasal cannula (HFNC):	☐ Yes ☐ No	i) Total duration of HFNC at your centre:	. Day (s)
		c) Conventional ventilation:	☐ Yes ☐ No	i) Total duration of Conventional ventilation at your centre :	. Day (s)
		d) HFJV/HFOV:	☐ Yes ☐ No	i) Total duration of HFJV/HFOV at your centre:	. Day (s)
		e) Nitric Oxide:	☐ Yes ☐ No	i) Total duration of Nitric Oxide at your centre:	. Day (s)
* 32. Surfactant:	☐ Yes →	☐ < 1 hr ☐ 1-2 hrs ☐ > 2 hrs			
	☐ No				
* 33. Parenteral nutrition:	☐ Yes	☐ No			

SECTION 4: PROBLEMS/ DIAGNOSES

* 34. Respiratory:	☐ Meconium aspiration syndrome ☐ Pulmonary haemorrhage ☐ Congenital pneumonia ☐ Community acquired pneumonia ☐ Transient tachypnoea of newborn ☐ Pulmonary interstitial emphysema ☐ Nosocomial pneumonia			
* 35. RDS:	☐ Yes ☐ No			
* 36. Pneumothorax:	☐ Yes →	Pneumothorax developed during: ☐ Spontaneous ☐ CPAP ☐ CMV ☐ HFV		
	☐ No			
* 37. Supplemental oxygen and BPD:	a) Is baby on > 21% oxygen continuously for 28 days or more? ☐ Yes ☐ No			
	b) If Yes		(i) for < 32 weeks GA, baby still on oxygen, CPAP or other forms of respiratory at 36 weeks ☐ Yes ☐ No	
			(ii) for ≥ 32 weeks GA, baby still on oxygen, CPAP or other forms of respiratory support at day 56 ☐ Yes ☐ No	
* 38. CVS:	*38a. PPHN :	☐ Yes ☐ No	*38b. Heart Failure :	☐ Yes ☐ No
* 39. PDA: (Only for < 37 weeks GA)	☐ Yes →	a) ECHO done:	☐ Yes ☐ No	
	☐ No	b) Pharmacological closure	☐ Yes ☐ No	
		c) Ligation:	☐ Yes ☐ No	
		If Yes then to choose ☐ Indomethacin ☐ Ibuprofen ☐ Paracetamol		
* 40. NEC (stage 2 and above):	☐ Yes →	a) surgical treatment	☐ Yes ☐ No	
	☐ No	b) NEC present before admission to your centre: (for outborn baby only)	☐ Yes ☐ No	
* 41. 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	☐ Yes →	a) Date of first screening:	/ /	
	(If yes, worst stage of ROP):	b) Post conceptional age at 1st screening :	(autocalculate)	
		c) ☐ No ROP ☐ Stage 1 ☐ Prethresh ☐ Thresh ☐ Stage 4 ☐ Stage 5 ☐ APROP ☐ PLUS disease		
		d) Laser Therapy:	☐ Yes ☐ No	
		e) Cryotherapy:	☐ Yes ☐ No	
		f) AntiVEGF:	☐ Yes ☐ No	
		g) Vitrectomy	☐ Yes ☐ No	
		h) ROP present prior to admission? (for outborn baby only)	☐ Yes ☐ No	
	☐ No →	Appointment given:	☐ Yes ☐ No	
	☐ Not Applicable	Date of appointment:	/ /	

SECTION 4: PROBLEMS/ DIAGNOSES (continue)

* 42a. IVH: < 37 weeks - option 'Not Applicable' will be auto blocked	☐ Yes <i>If yes, worst grade:</i> → ☐ No ☐ Not applicable (term infant) ☐ Ultrasound not done ☐ Grade 1 ☐ Grade 2 ☐ Grade 3 ☐ Grade 4 ☐ VP shunt/reservoir insertion								
* 42b. Cystic Periventricular Leukomalacia	☐ Yes ☐ No								
* 43a. 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								
* 43b. CLABSI	☐ Yes ☐ No								
* 44. Confirmed sepsis: (Blood culture positive only)	☐ Yes ☐ No ☐ ≤ 72 hours of life I) 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:								
* 45. Neonatal meningitis:	☐ Yes ☐ No CSF Culture positive : ☐ Yes ☐ No I) 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:								
* 46. HIE: (Only for ≥ 35 weeks GA) If None option chosen leave b,c and d blank	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">a) HIE severity</td> <td> ☐ None ☐ Mild ☐ Moderate ☐ Severe </td> </tr> <tr> <td>b) Highest Thompson</td> <td> </td> </tr> <tr> <td>c) Cooling therapy :</td> <td> ☐ Yes ☐ No If yes; then to choose ☐ Cooling blanket or cap ☐ Passive cooling ± gel pack ☐ Both </td> </tr> <tr> <td>d) Seizures in HIE cases:</td> <td> ☐ Yes ☐ No </td> </tr> </table>	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
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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								
* 47. Congenital anomalies:									
* 47a. Major congenital anomalies : ☐ Yes ☐ No ☐ Syndrome (known) ☐ Down ☐ Edward ☐ Patau ☐ Others, specify (Refer to ICD 10): ☐ Not a recognized syndrome ☐ Isolated major abnormality	* 47b. 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) : _____ ☐ Skeletal dysplasia ☐ Respiratory CDH ☐ Neural Tube Defect → ☐ Myelomeningocele ☐ Anencephaly ☐ Encephalocele ☐ Others (Refer to ICD 10) : _____ ☐ GIT ☐ Hydrops ☐ Renal ☐ Others, specify (Refer ICD10): ☐ None of the above ☐ CVS → Please see (page 4)								

SECTION 4: PROBLEMS/ DIAGNOSES (continue)

* 47c.

☐ CVS
Tick all present

- ☐ 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
 - ☐ Tricuspid atresia
 - ☐ Others, specify.....
- ☐ Non duct dependent lesion →
- ☐ TAPVD
 - ☐ ASD
 - ☐ VSD
 - ☐ AVSD
 - ☐ PDA (for term infant)
 - ☐ Others, specify.....

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

Intervention →

- ☐ Nil done
- ☐ Surgery
- ☐ Catheterization
- ☐ Died before operation
- ☐ Palliative
- ☐ For review later

Date done: ____/____/____ auto calculate age (days)
Date done: ____/____/____ auto calculate age (days)

Name of procedure: _____

SECTION 5: OUTCOME

*48a. Date of discharge / transfer / death: (dd/mm/yy)	*48b. Time of Death: (24 hour format) (mandatory for death cases)	(enter the best estimated time of death if the exact time is unknown)									
* 49. Weight and growth status on discharge:	a) Weight: (grams) b) Growth status: ☐ SGA ☐ AGA ☐ LGA										
* 50. Total duration of hospital stay (neonatal/ paed care):	(in completed days) (auto calculate)										
* 51. Home oxygen therapy:	☐ Yes ☐ No										
* 52. Outcome:	☐ Alive → Place discharged to: ☐ Home ☐ Social welfare home ☐ Other wards within hospital ☐ Still hospitalized as of 1st birthday ☐ Transfer to other hospitals → <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">a) Name of hospital:</td> <td colspan="2"></td> </tr> <tr> <td>b) Reason for transfer:</td> <td> ☐ Growth/ stepdown care ☐ Lack of NICU bed ☐ Chronic/ Palliative care </td> <td> ☐ Acute medical/ diagnostic services ☐ Surgery ☐ Social/Logistic reason ☐ Other, specify: </td> </tr> <tr> <td>c) Post transfer disposition: (Please fill this section if place transferred is not part of the NNR Network)</td> <td> ☐ Home ☐ Death </td> <td> ☐ Transferred again to another hospital ☐ Readmitted to your hospital ☐ Still in ward </td> </tr> </table> ☐ Dead → Place of death: ☐ Labour room/OT ☐ In transit ☐ Neonatal unit ☐ Others, specify:		a) Name of hospital:			b) Reason for transfer:	☐ Growth/ stepdown care ☐ Lack of NICU bed ☐ Chronic/ Palliative care	☐ Acute medical/ diagnostic services ☐ Surgery ☐ Social/Logistic reason ☐ Other, specify:	c) Post transfer disposition: (Please fill this section if place transferred is not part of the NNR Network)	☐ Home ☐ Death	☐ Transferred again to another hospital ☐ Readmitted to your hospital ☐ Still in ward
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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.

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

Immediate cause of death (Modified Wigglesworth):

Tick relevant button to reach correct classification

NEONATAL DEATH

Note: LCM = Lethal Congenital Malformation

(Is there any LCM?)

☐ LCM present

☐ LCM absent

b) (Is gestation <37 weeks?)

☐ Yes

☐ No

a) Lethal congenital malformation/defect, specify:

☐ Neural tube defects

☐ Anencephaly

☐ Encephalocele

☐ Others, specify _____

(Refer to ICD 10):

☐ CVS

☐ Complex Heart Disease

☐ Acyanotic

☐ CNS

☐ Hydrancephaly

☐ Holoprosencephaly

☐ Others, specify _____

(Refer to ICD 10):

☐ Recognisable syndrome

☐ Edward

☐ Patau

☐ Others, specify _____

(Refer to ICD 10):

☐ Not recognisable syndrome

☐ Skeletal dysplasia

☐ Respiratory (eg. lung hypoplasia)

☐ GIT

☐ Hydrops foetalis

☐ Renal

☐ Others, specify: _____

c) Gestation <37weeks
(Preterm Death without LCM) due to:

☐ IVH

☐ Septicaemia

☐ PDA in failure

☐ Pulmonary hemorrhage

☐ NEC

☐ Pneumonia

☐ PIE / BPD

☐ Pneumothorax

☐ Extreme prematurity

☐ Acute intrapartum event

☐ Severe RDS

☐ Others (specify) _____

Gestation ≥37 weeks
(Did the baby have an asphyxial condition?)

☐ d) Asphyxial condition absent
(Did the baby die from infection?)

☐ Asphyxial condition present

e) If term and infection present

☐ Group B streptococcal septicemia

☐ Meningitis

☐ Congenital pneumonia

☐ Congenital Infection

☐ Others, specify _____

If term and infection absent
(Are there any other specific causes of death?)

f) Other specific causes of death:

☐ Kernicterus / severe neonatal jaundice

☐ Haemorrhagic disease of newborn / Vitamin K deficiency

☐ Intracranial bleed / SAH

☐ Pneumothorax

☐ Pulmonary hemorrhage

☐ IEM

☐ MAS

☐ Surgical, specify: _____

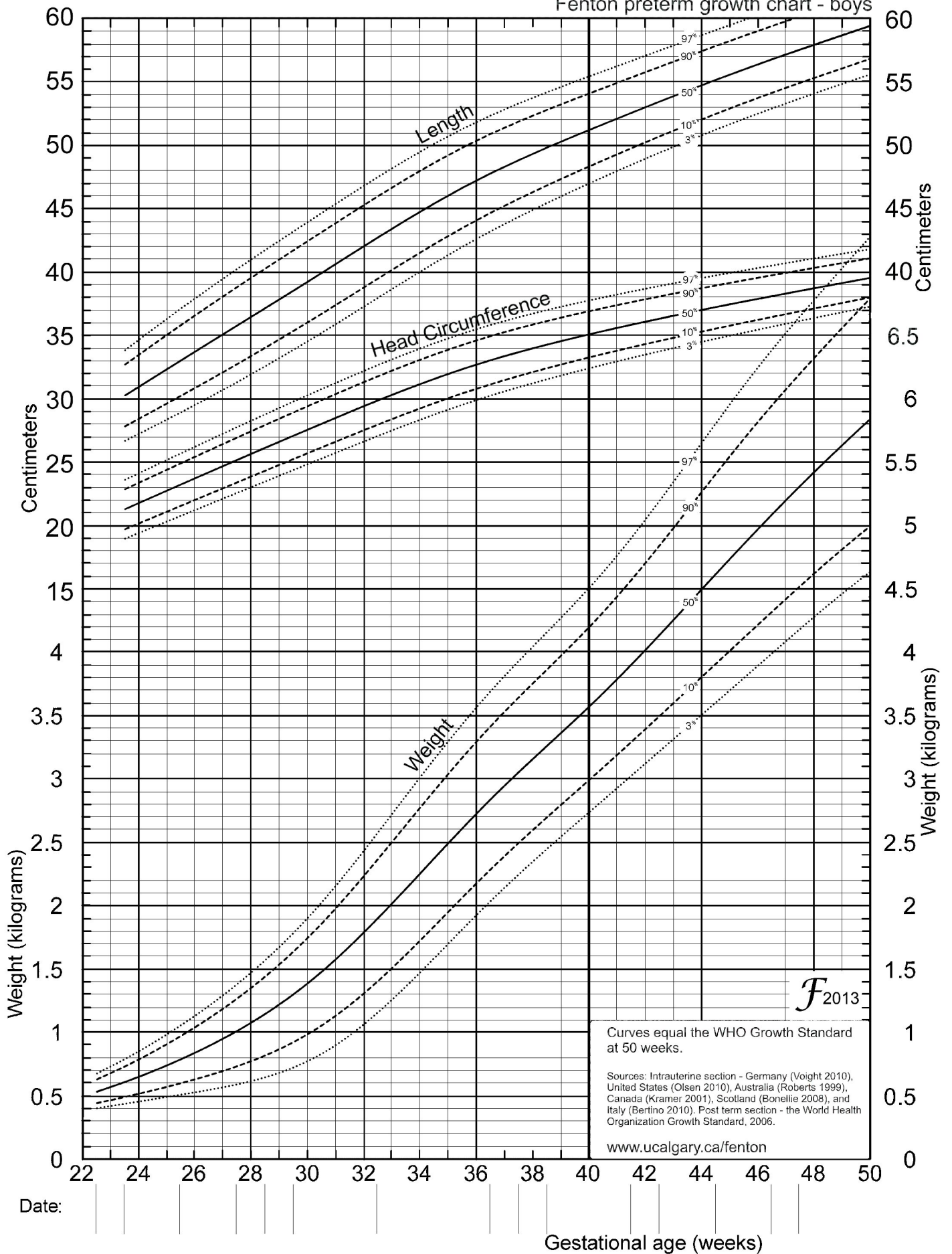
☐ Others, specify: _____

☐ Unknown cause

Name : _____ Signature: _____

Date: _____ (dd/mm/yy)

Fenton preterm growth chart - boys



Fenton preterm growth chart - girls

