MALAYSIAN NATIONAL NEONATAL REGISTRY (CRF 2012)

Centre Name: _____

Date of Admission: ☐☐☐ (dd/mm/yy)

○ New Case
○ Readmission
☐ Transfer from, if relevant : .....

MNNR No. (Office use): ☐☐☐☐☐☐

Centre: ☐☐☐☐☐☐

Admitted to neonatal ward: ○ Yes → (Proceed to complete all sections in this CRF) ○ No → (Proceed to complete [Sections 1,2,4(No.47) and 5]

☐ Abandoned baby → (if box is ticked, item # 1,4a, 6-16 not mandatory)

Instruction: Where check boxes ☐ are provided, check (√) one or more boxes. Where radio buttons ○ are provided(√) 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:**	Mycard: ☐☐☐☐☐☐ - ☐☐ - ☐☐☐☐ Other ID document No: ☐☐☐☐☐☐☐☐☐☐☐☐ Specify document type (if others): ○ Passport ○ Armed Force ID ○ Driver's License ○ Old IC ○ Hospital RN ○ Father's I/C ○ Work Permit number ○ Police ID Card ○ Immigration permit ○ Other, specify:.....
***4b. Baby's Mykid number:**	☐☐☐☐☐☐ – ☐☐ – ☐☐☐☐
***5a. Date of birth of baby:** (dd/mm/yy)	☐☐ / ☐☐ / ☐☐☐☐ **5b. Time of birth**: (24– hour format) (enter the best estimated time of birth if the exact time unknown) ☐☐☐☐
***6. Ethnic group of Mother:**	○ Malay ○ Indian ○ Bumiputra Sabah, specify:..... ○ Other, Malaysian ○ Chinese ○ Orang Asli ○ Bumiputra Sarawak, specify:..... ○ Non-citizen, specify country.....
***7. Maternal age:**	☐☐
***8. GPA:** (current pregnancy before delivery of this child)	*Gravida: ☐☐ *Parity: ☐☐ *Abortion: ☐☐
***9. Maternal diabetes (including gestational diabetes):**	○ Yes ○ No ○ Unknown
***10. Maternal hypertension, chronic pregnancy included:**	○ Yes ○ No ○ Unknown
***11. Maternal Eclampsia:**	○ Yes ○ No ○ Unknown
***12. Maternal Chorioamnionitis:**	○ Yes ○ No ○ Unknown
***13. Maternal Anaemia:**	○ Yes ○ No ○ Unknown
***14. Maternal abruption placenta:**	○ Yes ○ No ○ Unknown
***15. Maternal Bleeding placenta praevia:**	○ Yes ○ No ○ Unknown
***16. Cord prolapse:**	○ Yes ○ No ○ Unknown

SECTION 2 : BIRTH HISTORY

***17. Antenatal steroid:**	○ Yes → ○ 1 dose ○ 2 doses ○ No ○ Unknown
***18. Intrapartum antibiotic:**	○ Yes ○ No ○ Unknown
***19. Birth weight:**	☐☐☐☐ (grams)
***20a.Gestation:**	☐☐ (weeks) ***20b.Gestational age based on: (if patient died)** ○ LMP ○ Ultrasound ○ Neonatal assessment ○ Unknown
***21. Growth status:**	○ SGA ○ AGA ○ LGA
***22. Gender:**	○ Male ○ Female ○ Ambiguous/ Indeterminate
***23. Place of birth:**	○ Inborn ○ Outborn → ○ Home ○ University hospital ○ Enroute/ During transport ○ Health Clinic ○ Private hospital ○ Others, specify:..... ○ Private Hospital ○ Maternity home with specialist ○ Unknown ○ Government hospital with specialist ○ Maternity home without specialist ○ District ○ General ○ Alternative Birthing centre (ABC) ○ Urban ○ Rural ○ Government hospital without specialist
***24. Multiplicity:**	○ Singleton ○ Twin ○ Triplet ○ Other, specify: .....
***25. Final Mode of delivery:**	○ Vaginal delivery → ○ SVD ○ Breech ○ Caesarean section → ○ Elective ○ Emergency ○ Others, specify:..... ○ Instrumental → ☐ Vacuum ☐ Forceps ○ Unknown

SECTION 2 : BIRTH HISTORY (continue)

*26. Apgar score at 1 min and 5 min (1-10)	a) Score at 1 min:	☐ Unknown	b) Score at 5 min: (Please score even if the baby is intubated)	☐ Unknown
27. Initial resuscitation: (applicable for inborn only)	a) Oxygen:	○ Yes ○ No	d) Cardiac compression:	○ Yes ○ No
	b) Bag-mask vent:	○ Yes ○ No	e) Adrenaline:	○ Yes ○ No
	c) Endotracheal tube vent:	○ Yes ○ No		
*28. Admission temperature: (mandatory if admitted to Necnatal ward)		☐☐ . ☐ (°C)		

SECTION 3: NEONATAL EVENT

*29. Respiratory support: ○ Yes → ○ No

a) CPAP done?	○ Yes ○ No	
	i) Early CPAP within 1 hour from birth:	○ Yes ○ No
	ii) Total duration of CPAP at your centre:	☐☐ . ☐ day(s)
b) Conventional ventilation:	○ Yes ○ No	
	i) Total duration of Conventional ventilation at your centre:	☐☐ . ☐ day(s)
c) HFJV/HFOV:	○ Yes ○ No	
	i) Total duration of HFJ//HFOV at your centre:	☐☐ . ☐ day(s)
d) Nitric Oxide:	○ Yes ○ No	
	i) Total duration of Nitric Oxide at your centre:	☐☐ . ☐ day(s)

*30.Total number of days on ventilation support at your centre: ☐☐☐ . ☐ (autocalculate)

*31. Surfactant: ○ Yes → ○ < 1 hr ○ 1-2hrs ○ >2 hrs ○ No

*32. Parenteral nutrition: ○ Yes ○ No

SECTION 4: PROBLEMS/ DIAGNOSES

33. Respiratory: ☐ Meconium aspiration syndrome ☐ Pulmonary haemorrhage ☐ Pneumonia ☐ Transient tachypnoea of newborn ☐ Pulmonary interstitial emphysema

*34. RDS: ○ Yes ○ No

*35. Pneumothorax: ○ Yes → ○ No

Pneumothorax developed during:	○ CPAP	○ CMV	○ HFV

*36. Supplemental oxygen and BPD:

For babies <32 weeks-State 'yes' if O2 required for Day 28 AND if Oxygen or CPAP or ventilatory support required at 36 weeks corrected gestational age.

a) Day 28: ○ Yes ○ No b) 36 weeks corrected age: ○ Yes ○ No

For babies ≥32 weeks-State 'yes' if O2 required at 28days AND if any oxygen or CPAP or ventilatory support required at ≥56 postnatal days.

a) Day 28: ○ Yes ○ No b) ≥ Day 56: ○ Yes ○ No

*37. Cardiovascular PPHN: ○ Yes ○ No ○ Unknown

*38. PDA: ○ Yes → ○ No

a) ECHO done:	○ Yes	○ No
b) Indomethacin/Ibuprofen:	○ Yes	○ No
c) Ligation:	○ Yes	○ No

*39. NEC (stage 2 and above): ○ Yes → ○ No

A) surgical treatment:	○ Yes	○ No
B) NEC present before admission to your centre) (for outborn only)	○ Yes	○ No

*40. ROP Retinal Exam Done ○ Yes → *(If yes, worst stage of ROP):*

a) Date of first screening/appointment:	☐☐/☐☐/☐☐	
b) Post conceptional age at 1st screening:	☐☐ (autocalculate)	
c) ○ No ROP ○ Stage 1 ○ Stage 2 ○ Stage 3 ○ Stage 4 ○ Stage 5 ☐ PLUS disease		
d) Laser Therapy:	○ Yes	○ No
e) Cryotherapy:	○ Yes	○ No
f) Vitrectomy:	○ Yes	○ No
g) ROP present prior to admission? (for outborn baby only)	○ Yes	○ No

○ No → Appointment given: ○ Yes ○ No

○ Not Applicable

SECTION 4: PROBLEMS/ DIAGNOSES (continue)

***41. IVH:** ○ Yes *If yes, worst grade:* → ○ Grade 1 ○ Grade 2 ○ Grade 3 ○ Grade 4; ☐ VP shunt/ reservoir insertion
○ No
○ Not applicable (term infant)
○ Ultrasound not done

***42. Central venous line:** ○ Yes ○ No

***43. Seizures:** ○ Yes ○ No

***44. Confirmed sepsis:** ○ Yes → ○ No

I) For first episode: ○ On or before day of life ○ After day 3 of life

II) Type of organism: (can tick more than one)
☐ Group B Streptococcus ☐ ESBL organisms ☐ Klebsiella ☐ Others, specify: .....
☐ MRSA ☐ Fungal ☐ Pseudomonas
☐ CONS ☐ Staphylococcus aureus ☐ Acinetobacter

45. Neonatal meningitis: ○ Yes ○ No

***46. Hypoxic ischaemic encephalolopathy (HIE):** ○ None ○ Mild ○ Moderate ○ Severe

***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 inclusing 'known syndromes', 'not a recognized syndrome' or 'isolated major abnormality')**

☐ CVS → ○ Cyanotic ○ Acyanotic; ☐ ECHO done

☐ CNS →
- ○ Hydrocephalus
- ○ Hydrancephaly
- ○ Holoprosencephaly
- ○ Others (Refer to ICD 10):_____

☐ Neural Tube Defect →
- ☐ Spina bifina
- ☐ Anencephaly
- ☐ Encephalocoele
- ☐ Others (Refer to ICD 10):_____

☐ Skeletal dysplasia
☐ Respiratory
☐ GIT
☐ Hydrops
☐ Renal
☐ Cleft → ○ Lip ○ Palate ○ Lip and Palate
☐ Others, specify (Refer to ICD10):
☐ None of the above

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. Feeding at discharge / death:** ○ Never fed ○ Human milk only ○ Formula only ○ No data/ Unknown

***51. Total duration of hospital stay (neonatal/ peads care):** ☐☐☐ (in completed days) (autocalculate)

***52. Outcome:**

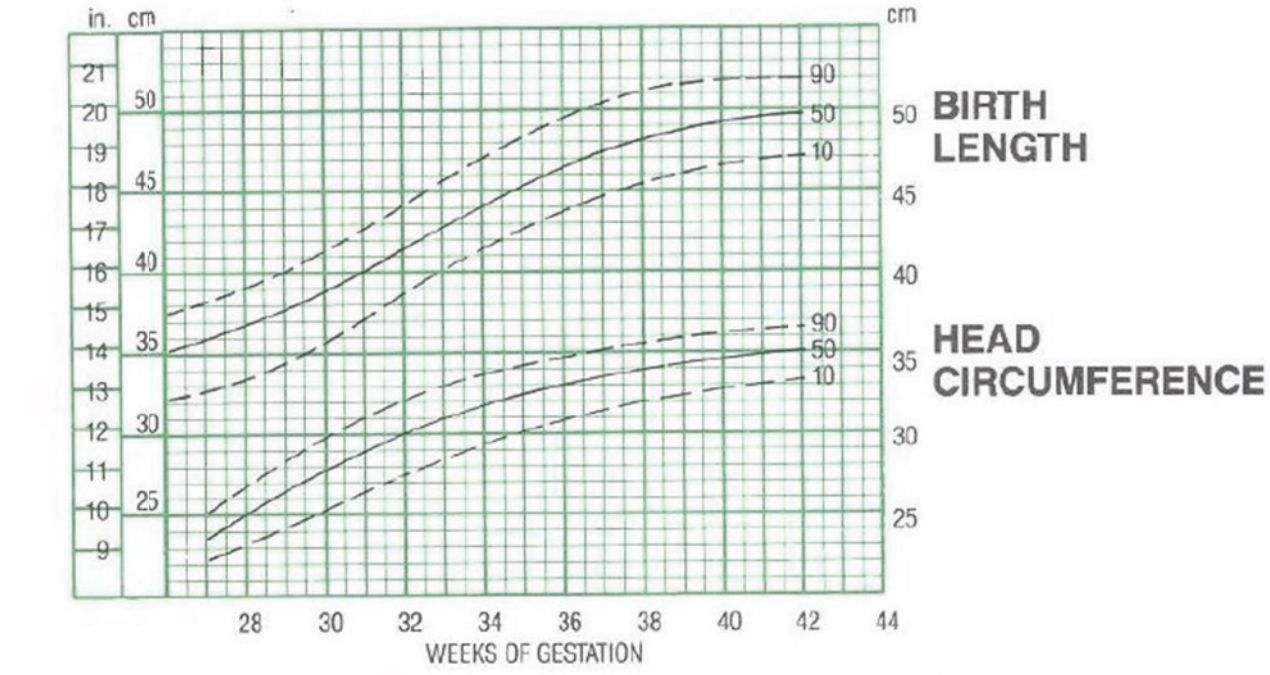
○ Alive →

Place discharged to:
- ○ Home
- ○ Social welfare home
- ○ Other non Paeds ward
- ○ Still hospitalized as 1st birthday
- ○ Transfer to other hospitals →
  - **a) Name of hospital:**
  - **b) Reason for transfer:** ○ Growth/ stepdown care ○ Acute medical/ diagnostic services ○ Social/ Logistic reason ○ Lack of NICU bed ○ Other, specify: ..... ○ Chronic/ Palliative care ○ Surgery
  - **c) Post transfer disposition:** (Please fill this section if place transferred is not part of the NNR Network) ○ Home ○ Transferred again to another hospital ○ Death ○ Readmitted to your hospital

○ Dead → **Place of death:** ○ Labour room/OT ○ Neonatal unit ○ In transit ○ Others, specify: .....

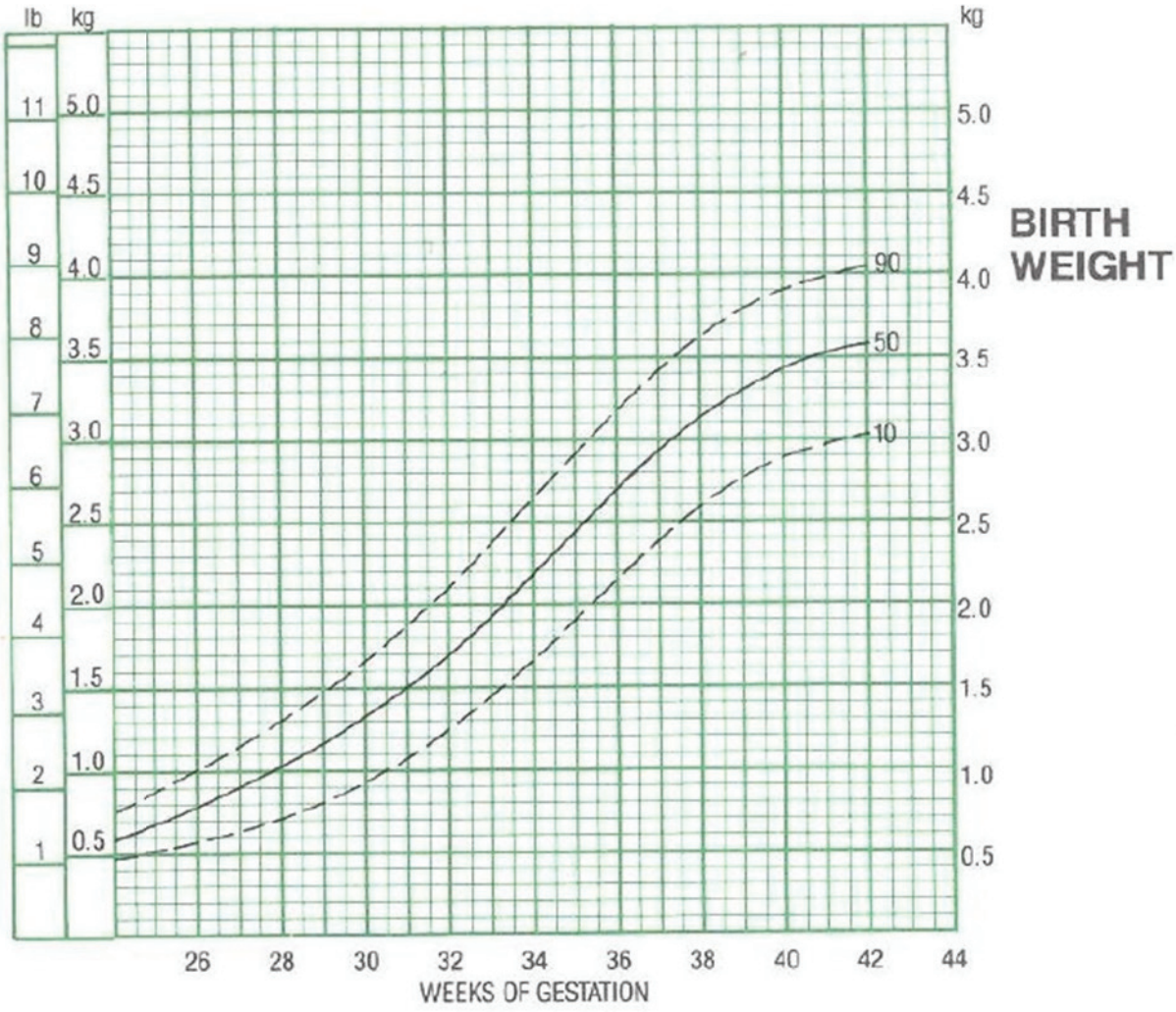
Name : _____ **Signature:** _____ **Date:** ☐☐☐ **(dd/mm/yy)**

INTRAUTERINE GROWTH CURVES (COMPOSITE MALE / FEMALE) (APPENDIX 2)



BIRTH LENGTH

HEAD CIRCUMFERENCE



BIRTH WEIGHT

Data Source: W.H. Kitchen et al Revised intrauterine growth curves for an Australian hospital population.
Aust. Paediatr. J. (1983) 19:157–161.