

MALAYSIAN NATIONAL NEONATAL REGISTRY (CRF 2017)

Centre Name:		☐ New Case ☐ Readmission ☐ Transfer from another SDP Hospital or IJN:		MNNR No. (Office use): / Centre: 	
Date of Admission: (dd/mm/yy)					

Admitted to neonatal ward: ☐ Yes → (Proceed to complete ALL sections in this CRF) ☐ No → (Proceed to complete Section 1, 2 [without No.28], 4[No.47 only] and 5)

☐ Abandoned baby → (if this box is ticked, item No. 1, No. 4a, No. 6 to No.16 are not mandatory)

Instruction: Where check boxes ☐ are provided, ticked (✓) one or more boxes. Where radio buttons ☐ 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: - - 					
	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: (<11g/dL)	☐ 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 ☐ Ballard Score ☐ Ultrasound ☐ Unknown
*21. Growth status:	☐ SGA ☐ AGA ☐ LGA		
*22. Gender:	☐ Male ☐ Female ☐ Ambiguous / Indeterminate		
*23. 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		
*24. Multiplicity:	☐ Singleton ☐ Twin ☐ Triplet ☐ Other, specify: Specify birth order if not a singleton: 		
*25. Final Mode of delivery:	☐ Vaginal delivery → ☐ SVD ☐ Breech ☐ Caesarean section → ☐ Elective ☐ Emergency ☐ Instrumental → ☐ Vacuum ☐ Forceps ☐ Others, specify: ☐ Unknown		

*26. 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
27. 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
*28.	a) Plastic wrap at birth (for <1000 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)				

*29. 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 d) for each type of respiratory support given	<table border="1"> <tr> <td data-bbox="413 463 518 535"> ☒ Yes → ☐ No </td> <td data-bbox="525 463 1508 535"> a) CPAP done? ☒ Yes ☐ No ii) Total duration of CPAP at your centre: . Day(s) </td> </tr> <tr> <td data-bbox="413 542 518 613"> ☒ Yes → ☐ No </td> <td data-bbox="525 542 1508 613"> b) High flow nasal cannula (HFNC): ☒ Yes ☐ No i) Total duration of HFNC at your centre: . Day (s) </td> </tr> <tr> <td data-bbox="413 620 518 692"> ☒ Yes → ☐ No </td> <td data-bbox="525 620 1508 692"> c) Conventional ventilation: ☒ Yes ☐ No i) Total duration of Conventional ventilation at your centre : . Day (s) </td> </tr> <tr> <td data-bbox="413 698 518 770"> ☒ Yes → ☐ No </td> <td data-bbox="525 698 1508 770"> d) HFJV/HFOV: ☒ Yes ☐ No i) Total duration of HFJV//HFOV at your cetre: . Day (s) </td> </tr> <tr> <td data-bbox="413 777 518 848"> ☒ Yes → ☐ No </td> <td data-bbox="525 777 1508 848"> e) Nitric Oxide: ☒ Yes ☐ No i) Total duration of Nitric Oxide at your centre: . Day (s) </td> </tr> </table>	☒ Yes → ☐ No	a) CPAP done? ☒ Yes ☐ No ii) Total duration of CPAP at your centre: . Day(s)	☒ Yes → ☐ No	b) High flow nasal cannula (HFNC): ☒ Yes ☐ No i) Total duration of HFNC at your centre: . Day (s)	☒ Yes → ☐ No	c) Conventional ventilation: ☒ Yes ☐ No i) Total duration of Conventional ventilation at your centre : . Day (s)	☒ Yes → ☐ No	d) HFJV/HFOV: ☒ Yes ☐ No i) Total duration of HFJV//HFOV at your cetre: . Day (s)	☒ Yes → ☐ No	e) Nitric Oxide: ☒ Yes ☐ No i) Total duration of Nitric Oxide at your centre: . Day (s)
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*30.Total number of days on ventilation support at your centre:	. (autocalculate)										
*31. Surfactant:	☒ Yes → ☒ < 1 hr ☐ 1-2 hrs ☐ > 2 hrs ☐ No										
*32. Parenteral nutrition:	☒ Yes ☐ No										

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

SECTION 4: PROBLEMS/ DIAGNOSES (continue)

*41. IVH:	☒ Yes <i>If yes, worst grade:</i> → ☒ 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		
42b. 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) : ☐ Skeletal dysplasia ☐ Respiratory ☐ CDH ☐ GIT ☐ Hydrops ☐ Renal ☐ Others , specify (Refer ICD10) : ☐ None of the above			
☐ Neural Tube Defect → ☐ Spina bifida ☐ Anencephaly ☐ Encephalocele ☐ Others (Refer to ICD 10) :			
☐ CVS → Please see (page 4)			

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

☐ Catheterization

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

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

Name of procedure: _____

SECTION 5: OUTCOME

*47a. 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)
*48. Weight and growth status on discharge:	a) Weight: (grams)	
	b) Growth status: ☐ SGA ☐ AGA ☐ LGA	
49. Exclusive breastfeeding At discharge : (Tick yes if > 72 hour before discharge)	☐ Yes ☐ No	
*50. Total duration of hospital stay (neonatal/ peds care):	(in completed days) (auto calculate)	
*51. Outcome:		
☒ Alive → Place discharged to: ☐ Home ☐ Social welfare home ☐ Other wards within hospital ☐ Still hospitalized as of 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 ☐ Surgery ☐ Chronic/ Palliative care ☐ Other, specify: 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 ☐ Still in ward		
☐ Dead → Place of death: ☐ Labour room/OT ☐ Neonatal unit ☐ In transit ☐ 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.

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

Immediate cause of death (Modified Wigglesworth):

Tick relevant button to reach correct classification

NEONATAL DEATH
(Is there any LCM?)

Note: LCM = Lethal Congenital Malformation

☐ LCM present

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: _____

☐ LCM absent

b) (Is gestation <37 weeks?)

☐ Yes

c) Gestation <37 weeks
(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) _____

☐ No

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

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

☐ Asphyxial condition present

If term and infection present

☐ e)

☐ Group B streptococcal septicaemia

☐ 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)

