

# Neonatal Research Network Database Ver 8.3

(gestational age less than 32 weeks, or birthweight at or less than 1500g, Year 2024)

101 Hospital ID(Facility:id) \_\_\_\_\_

ItemNo	Items	Notes
201	Patient Number(Patient:no) _____	
<b>A</b>	<b>Mother</b>	
301	Maternal age(Maternal:age) _____ y	Unknown:99
302	Gravida(Maternal:gravida) _____	Unknown:99
303	Parity(Meternal:parity) _____	Unknown:99
304	Maternal Comorbidity(Maternal:Comorbidity:main) (If any, enter ICD10 code) _____	ICD10
305	Artificial Reproductive Technology(Maternal:ART) 1:yes,2:no,3:unknown	
306	Foreigner(Maternal: foreigner) 1:yes (nationality: _____),2:no,3:unknown	
307	Nationality ( _____ )	
<b>B</b>	<b>Pregnancy</b>	
401	Number of fetus(Pregnancy:multiple) _____	
402	Order of birth,(Pregnancy:multiple:order)(if multiple pregnancy) _____	
403	Plurarity (Pregnancy:plurarity)(if multiple pregnancy) 1: monochorionic、2: multiple-chorionic、3: unknown	
404	Diabetes Meritus(Pregnancy:DM)(including gestational DM) 1: yes、2: no、3: unknown	
415	Chronic hypertension(Chronic hypertension) 1: yes、2: no、3: unknown	
405	Pregnancy induced hypertension(Pregnancy:hypertension) 1: yes、2: no、3: unknown	
406	Clinical chorioamnionitis(Maternal:CAM:clinical) 1: yes、2: no、3: unknown	
407	Histologic chorioamnionitis(Maternal:CAM:pathological) 1: yes、2: no、3: unknown	
408	Grade of histologic CAM(Maternal:CAM:pathological:grade)(CAMの場合) 1: I、2: II、3: III	
<b>C</b>	<b>Delivery</b>	
521	Hydrops(LaborDelivery: hydrops) 1:yes,2:no,3:unknown	
501	Premature rupture of membranes(LaborDelivery:PROM) 1: yes、2: no、3: unknown	
522	Timing of premature rupture of membranes(LaborDelivery:PROM:duration)1:less than 24 hrs before delivery,2:24 hrs-1 week,3:more than 1 week,4:unknown	
523	Placental abruptio(LaborDelivery:abruptio) 1:yes,2:no,3:unknown	
524	Umbilical cord prolapse(LaborDelivery:prolapse) 1:yes,2:no,3:unknown	
502	Maternal steroid use(LaborDelivery:steroid) 1: yes、2: no、3: unknown	
531	Maternal steroid doses(LaborDelivery:steroid:course) 1:1 course completed,2:not completed	
540	Maternal magnesium use(LborDeliverty:Mg) 1:yes,2:no,3:unknown	
503	Abnormality of fetal heart rate monitoring(LaborDelivery:NRFS) 1: yes、2: no、3: unknown	
504	Presentation(LaborDelivery:presentation) 1: head、2: others、3: unknown	
505	Mode(LaborDelivery:mode) 1: vaginal、2: vaginal with vacuum or forceps、3: cesarean section	
509	Feto-Maternal transfusion(LaborDelivery:feto-maternal transfusion) 1: yes、2: no、3: unknown	
510	Cord blood transfusion(LaborDelivery:cordblood:transfusion) 1: yes、2: no、3: unknown	

511	Method of cord blood transfusion(LaborDelivery:cordblood:transfusion:method)1:umbilical cord milking before cord clamping,2:umbilical cord milking after cord clamping,3:delayed cord clamping for 30-60 sec,4:delayed cord clamping by more than 60 sec	
<b>D</b>	<b>Neonate</b>	
602	Age of admission(Neonatal:admission:day) _____	< 28
603	Sex(Neonatal:sex)	1 : male、 2 : female、 3 : unknown
604	Outborn infants(Neonatal:outborn)	1 : yes、 2 : no
605	Maternal transfer(Neonatal:inborn)(If inborn infant) 1 : elective transfer、 2 : emergency transfer、 3 : booked patient	
606	Gestation age(Neonatal:GA:wk) 607 (Neonatal:GA:day) _____ wk _____ d	Unknown:99
690	Confirmation of gestational age by US(Neonatal:GA:confirm)	1 : yes、 2 : no、 3 : unknown
608	1 m Apgar(Neonatal:ap1)	_____
609	5 m Apgar(Neonatal:ap5)	_____
651	10 m Apgar(Neonatal:ap10)	_____
655		
610	Oxygen use at birth(Neonatal:resuscitation:oxygen)	1 : yes、 2 : no、 3 : unknown
611	Endotracheal intubation at birth(Neonatal:resuscitation:intubation)	1 : yes、 2 : no、 3 : unknown
652		
653		
654		
612	Birthweight(Neonatal:birthweight)	_____g
613	Length(Neonatal:length)	_____. ____cm
614	Head circumference(Neonatal:HC)	_____. ____cm
615	Live birth(Neonatal:livebirth)(If “no”, goto [1411])	1 : yes、 2 : no
620	Arterial cord blood gas sampling(Neonate:cordbloodgas:sample)	1 : yes、 2 : no、 3 : unknown
622	Cord blood gas pH(Neonate:cordbloodgas:pH)	____. _____
624	Cord blood gas PO2(Neonate:cordbloodgas:PO2)	____. ____ Torr
626	Cord blood gas PCO2(Neonate:cordbloodgas:PCO2)	____. ____ Torr
628	Cord blood gas BE(Neonate:cordbloodgas:BE)	- _____. ____ mmol/L
630	Neonatal blood gas sampling on admission(Neonate:neonatalbloodgas:sample)	1 : yes、 2 : no、 3 : unknown
631	Sampling site of neonatal blood(Neonate:neonatalbloodgas:samplesite)1:artery、 2:venous、 3:unknown	
632	Neonatal blood gas pH(Neonate:neonatalbloodgas:pH)	____. _____
634	Neonatal blood gas PO2(Neonate:neonatalbloodgas:PO2)	____. ____ Torr
636	Neonatal blood gas PCO2(Neonate:neonatalbloodgas:PCO2)	____. ____ Torr
638	Neonatal blood gas BE(Neonate:neonatalbloodgas:BE)	- _____. ____ mmol/L
661		
662		
<b>E</b>	<b>Respiratory system</b>	
701	RDS(Pulmonary:RDS)	1 : yes、 2 : no

702	Air leak syndrome(Pulmonary:airleak)	1 : yes、 2 : no	
703	Pulmonary hemorrhage(Pulmonary:hemorrhage)	1 : yes、 2 : no	
705	Pulmonary hypertension of the newborn(Pulmonary:PPHN)	1 : yes、 2 : no	
706	Duration of oxygen use(Pulmonary:oxygen) (Day of age when oxygen stopped)	_____ d	
707	Duration of CPAP(Pulmonary:CPAP)	_____ d	
708	Duration of mechanical ventilation(Pulmonary:MV)	_____ d	
709	Use of HFO(Pulmonary:HFO)	1 : yes、 2 : no	
710	Doses of pulmonary surfactant(Pulmonary:STA)	_____ times	
711	Duration of nitric oxide use(Pulmonary:NO)	_____ d	
712	Chronic lung disease(Pulmonary:CLD)	1 : yes、 2 : no	
713	Type of CLD(Pulmonary:CLD:type)(If CLD)	1 : I、 2 : II、 3 : III、 4 : III'、 5 : IV、 6 : V、 7 : VI	
714	Glucocorticoid use for CLD(Pulmonary:CLD:steroid)(If CLD present)	1 : yes、 2 : no	
717	Inhaled glucocorticoid use for CLD(Pulmonary:CLD:inhaledsteroid)	1 : yes、 2 : no	
715	Oxygen use for CLD at 36 wk of corrected age(Pulmonary:CLD:36wk)	1 : yes、 2 : no	
716	Oxygen concentration at 36 wk of corrected age(Pulmonary:CLD:36wk:O2)	_____ %	
<b>F</b>	<b>Circulatory system</b>		
801	Symptomatic PDA(Cardiac:PDA)	1 : yes、 2 : no	
802	Indomethacin use(Cardiac:PDA:indomethacin)	1 : yes、 2 : no、 3 : prophylactic use	
803	PDA ligation(Cardiac:PDA:surgery)	1 : yes、 2 : no	
851	Glucocorticoid use for late onset circulatory collapse(Cardiac:adrenal:steroid)	1 : yes、 2 : no	
<b>G</b>	<b>Central nervous system</b>		
901	Neonatal seizure(Neurologic:seizure)	1 : yes、 2 : no	
902	Intraventricular hemorrhage(Neurologic:IVH)	1 : yes、 2 : no	
903	Grade of IVH(Neurologic:IVH:grade) (If IVH present)	1 : I、 2 : II、 3 : III、 4 : IV	
904	Post IVH hydrocephalus(Neurologic:IVHhydrocephalus) (If IVH present)	1 : yes、 2 : no	
905	Periventricular leukomalacia(Neurologic:cPVL)	1 : yes、 2 : no	
906	Hypoxic ischemic encephalopathy(Neurology:HIE)	1 : yes、 2 : no	
<b>H</b>	<b>Infection</b>		
1001	Intrauterine infection(Infection:intrauterine)	1 : yes、 2 : no	
1002	Sepsis(Infection:sepsis)	1 : yes、 2 : no	
1004	Early onset sepsis(within 7 days of age)(Infection:sepsis:onset)	1 : yes、 2 : no	
1010	Use of antibiotics(Infection:antibiotics)	1 : yes、 2 : no	
<b>I</b>	<b>Digestive system</b>		
1101	Use of intravenous hyperalimentation(Gastrointestinal:hyperalimentation)	1 : yes、 2 : no	
1102	Necrotizing enterocolitis(Gastrointestinal:NEC)	1 : yes、 2 : no	
1103	Idiopathic intestinal perforation(Gastrointestinal:perforation)	1 : yes、 2 : no	
1104	Meconium related ileus	1 : yes、 2 : no	
1111	Treatment for intestinal perforation	1:drainage only,2:laparotomy,3:laparotomy and ileostomy,4:no treatment	
<b>J</b>	<b>Hearing system</b>		

1201	Hearing screening(Hearing:screening:result)	1:normal、2:abnormal、3: not performed	
<b>K</b>	<b>Retinopathy</b>		
1301	Stage of ROP(ROP:stage)(Most severe stage) Japan MLHW 1:lower than II、2:early III、3:middle III、4: more than lateIII、5: not performed International classification 6:lower than II、7:early III、8:middle III、9: more than lateIII		
1302	ROP treatment(ROP:Tx)	1: yes、2: no	
1305	ROP treatment with anti-VEGF antibody(ROP:Tx:antiVEGF)	1: yes、2: no	
<b>L</b>	<b>Other complications</b>		
1411	Congenital anomaly(Diagnosis:malformation)	1: yes、2: no	
1412	Diagnosis of congenital anomaly(Diagnosis:malformation:disease)(If congenital anomaly present) Refer Table 2 in operational manual		code
1413	Operation for congenital anomaly(Diagnosis:malformation:surgery)	1: yes、2: no	
<b>M</b>	<b>Summary</b>		
1501	Day of enteral feeding more than 100ml/kg/day(Summary:feeding:100)		_____d
1511	Blood transfusion(Summary:anemia:rbctransfusion)	1: yes、2: no	
1512	Erythropoietin use(Summary:anemia:EPO)	1: yes、2: no	
<b>N</b>	<b>Discharge</b>		
1620	Transfer to high level hospital(Tranfer)	1: yes、2: no	
1630	Purpose of transfer		_____
1635			
1601	Age of discharge(Discharge:day)		_____d If not discharged, enter 999
1602	Death at discharge(Discharge:death)	1: yes、2: no	
1603	Autopsy(Discharge:autopsy)(If died at discharge)	1: yes、2: no	
1604	Cause of death(Discharge:causeofdeath:code)(If died at discharge) Refer Table 3 in operational manual		code _____
1605	Disposition to home(Discharge:home)	1: yes、2: no	
1606	Place of transfer(Discharge:transfer)(If transfered) 1: hospital born、2: another NICU、3: pediatric ward、4: pediatric ward of another hospital、5: hospital for handicapped infants、6: foster nursery		
1607	Home oxygen treatment(Discharge:oxygen)	1: yes、2: no	
1608	Tracheostomy at discharge (Discharge:tracheostomy)	1: yes、2: no	
1609	Body weight at discharge(Discharge:weight)		_____g
1610	Body length at discharge(Discharge:length)		_____. ____cm
1611	Head circumference at discharge(Discharge:HC)		_____. ____cm
<b>O</b>	<b>Outcomes at discharge</b>		
1701	Motor disorder(Disabled: motor)	1: yes、2: no	
1702	Visual disorder(Disabled: vision)	1: yes、2: no	
<b>P</b>	<b>Outcomes at Collected age of 18~24 months</b>		
2010	Followup at the collected age of 18~24 months(Followup:1.5)	1: yes、2: no	

2012	Died before followup visit (Followup:1.5:death)	1 : yes, 2 : no, 3 : unknown	
2014	Cause of death (Followup:1.5:death:cause) (If died after discharge)	_____	
2016	Reason for not coming for followup (Followup:1.5:dropout) (If not died after discharge) 1 : following at different hospital, 2 : admitting at institute for handicapped children, 3 : no contact, 5 : admitting at different hospital, 6 : not discharge yet, 4 : Others ( _____ )		
2018	Name of different hospital (Followup:1.5:hospital) (If followed up at different hospital)	_____	
2019	Reason not coming for followup (other reason above) (Followup:1.5:dropout:reason)	_____	
2020	Chronological age at followup, 2020 year and 2021 month ( Followup:1.5:age:year ) (Followup:1.5:age:month)	_____ year _____ month	
2022	Corrected age at followup, 2022 year and 2023 month (Followup:1.5:correctedage:year)	_____ year _____ month	
2030	Body weight (Followup:1.5:weight)	_____. ____ kg	
2040	Body height (Followup:1.5:height)	_____. ____ cm	
2050	Head circumference (Followup:1.5:HC)	_____. ____ cm	
2060	Oxygen use (Followup:1.5:oxygen)	1 : yes, 2 : no	
2061	Last age of oxygen use (Followup:1.5:oxygen:duration) (chronological age) (Until)	_____ months of age	
2070	Visual disability (Followup:1.5:vision)	1 : yes, 2 : no	
2071	Degree of visual disability (Followup:1.5:vision:disability) (if disability exists) (corrected eyesight) 1 : blind or light perception, 2 : amblyopia • finger movement or nystagmus, 3 : strabismus, 4 : others ( _____ )		
2072	Wearing glasses (Followup:1.5:vision:glass)	1 : yes, 2 : no	
2080	Cerebral palsy (Followup:1.5:CP)	1 : yes, 2 : no	
2081	GMFCS scaling (Followup:1.5:CP:GMFCS)	1 : I, 2 : II, 3 : III, 4 : IV, 5 : V	
2082	Type of palsy (Followup:1.5:CP:type) 1 : spastic, 2 : athetoid, 3 : mixed, 4 : flaccid, 5 : Others ( _____ )		
2083	Cause of palsy (Followup:1.5:CP:cause)	1 : PVL, 2 : IVH, 3 : Others ( _____ )	
2085	DQ test (Followup:1.5:DQ)	1 : yes, 2 : no	
2088	Reason for not testing DQ (Followup:1.5:DQ:Reason) (If DQ missed) 1 : normal development by physician in charge 2 : severe delay by physician in charge 3 : no consent from parents 4 : sever complications 5 : tried, but failed to finish 6 : others ( _____ )		
2100	Method of DQ test (Followup:1.5:DQ:method)	1 : New Kyoto scale, 2 : other	
2101	DQ (Followup:1.5:DQ) (chronological DQ) (K scale)	_____	
2102	DQ (Followup:1.5:DQ) (corrected age) (K scale)	_____	
2103	DQ motor (Followup:1.5:DQ:motor) (chronological age) (K scale)	_____	
2104	DQ motor (Followup:1.5:DQ:motor) (corrected age) (K scale)	_____	
2105	DQ cognitive (Followup:1.5:DQ:cognitive) (chronological age) (K scale)	_____	

2106	DQ cognitive (Followup:1.5:DQ:cognitive) (corrected age) (K scale)	
2107	DQ verbal (Followup:1.5:DQ:verbal) (chronological age) (K scale)	
2108	DQ verbal (Followup:1.5:DQ:verbal) (corrected age) (K scale)	
2111	Method of DQ test other than Kyoto scale (Followup:1.5:DQ:othermethod) (If not K scale) 1: Bayley, 2: Enjoji, 3: Tsumori Inage, 4: Others ( )	
2112	DQ measured by other than K scale (Followup:1.5:DQ) (chronological age)	
2113	DQ measured by other than K scale (Followup:1.5:DQ) (corrected age)	
2114	Evaluation (Followup:1.5:DQ) 1: normal, 2: border line, 3: delay	
2115	Evaluation by physician in charge DQ (Followup:1.5:DQ) (corrected age) 1: normal, 2: border line, 3: delay	
2120	Hearing disability (Followup:1.5:hearing) 1: yes, 2: no	
2122	Hearing aid (Followup:1.5:hearing:aid) (If hearing disability) 1: yes, 2: no	
2123	Hearing ability (Followup:1.5:hearing:ability) (corrected) 1: no disability, 2: moderate (40dB~), 3: sever (90dB~)	
2130	Bronchial asthma (needs medication) (Followup:1.5:asthma) 1: yes, 2: no	
2140	Epilepsy (needs medication) (Followup:1.5:epilepsy) 1: yes, 2: no	
2150	Home health care (Followup:1.5:homehealthcare) 1: yes, 2: no	
2151	Home mechanical ventilation (Followup:1.5:homehealthcare:respirator) (If medically caring at home) 1: yes, 2: no	
2152	Tracheostomy (Followup:1.5:homehealthcare:tracheostomy) (If medically caring at home) 1: yes, 2: no	
2153	Tube or gastrostomy feeding (Followup:1.5:homehealthcare:tube) (If medical caring at home) 1: yes, 2: no	
2154	VP shunt (Followup:1.5:homehealthcare:VPshunt) (If medically caring at home) 1: yes, 2: no	
2155	Others (Followup:1.5:homehealthcare:others) (If medically caring at home) ( )	
2160	Educational training (Followup:1.5:educationaltraining) 1: yes, 2: no	
<b>Q</b>	<b>Outcomes at 3 years of age</b>	
2210	Followup at 3 years of age (Followup:3) 1: yes, 2: no	
2212	Died before followup visit (Followup:3:death) 1: yes, 2: no, 3: unknown	
2214	Cause of death (Followup:3:death:cause) (If died after discharge)	
2216	Reason for not coming for followup (Followup:3:dropout) (If not died after discharge) 1: following at different hospital, 2: admitting at institute for handicapped children, 3: no contact, 5: admitting at different hospital, 6: not discharge yet, 4: Others ( )	
2218	Name of different hospital (Followup:3:hospital) (If followed up at different hospital)	
2219	Reason not coming for followup (other reason above) (Followup:3:dropout:reason)	
2220	Chronological age at followup, 2220 year and 2221 month ( Followup:3:age:year ) (Followup:3:age:month) year month	
2222	Corrected age at followup, 2222 year and 2223 month (Followup:3:correctedage:year) year month	

2230	Body weight (Followup:3:weight)	____. ____ kg	
2240	Body height (Followup:3:height)	____. ____ cm	
2250	Head circumference (Followup:3:HC)	____. ____ cm	
2252	Chest circumference (Followup:3:CC)	____. ____ cm	
2254	Abdominal circumference (Followup:3:AC)	____. ____ cm	
2260	Oxygen use (Followup:3:oxygen)	1 : yes, 2 : no	
2261	Last age of oxygen use (Followup:3:oxygen:duration) (chronological age) (Until)	____ months of age	
2270	Visual disability (Followup:3:vision)	1 : yes, 2 : no	
2271	Degree of visual disability (Followup:3:vision:disability) (if disability exists) (corrected eyesight) 1 : blind or light perception, 2 : amblyopia *finger movement or nystagmus, 3 : strabismus, 4 : others ( ____ )		
2272	Wearing glasses (Followup:3:vision:glass)	1 : yes, 2 : no	
2280	Cerebral palsy (Followup:3:CP)	1 : yes, 2 : no	
2281	GMFCS scaling (Followup:3:CP:GMFCS)	1 : I, 2 : II, 3 : III, 4 : IV, 5 : V	
2282	Type of palsy (Followup:3:CP:type) 1 : spastic, 2 : athetoid, 3 : mixed, 4 : flaccid, 5 : Others ( ____ )		
2283	Cause of palsy (Followup:3:CP:cause)	1 : PVL, 2 : IVH, 3 : Others ( ____ )	
2285	DQ test (Followup:3:DQ)	1 : yes, 2 : no	
2288	Reason for not testing DQ (Followup:3:DQ:Reason) (If DQ missed) 1 : normal development by physician in charge 2 : severe delay by physician in charge 3 : no consent from parents 4 : sever complications 5 : tried, but failed to finish 6 : others ( ____ )		
2300	Method of DQ test (Followup:3:DQ:method)	1 : New Kyoto scale, 2 : other	
2301	DQ (Followup:3:DQ) (chronological DQ) (K scale)	_____	
2302	DQ (Followup:3:DQ) (corrected age) (K scale)	_____	
2303	DQ motor (Followup:3:DQ:motor) (chronological age) (K scale)	_____	
2304	DQ motor (Followup:3:DQ:motor) (corrected age) (K scale)	_____	
2305	DQ cognitive (Followup:3:DQ:cognitive) (chronological age) (K scale)	_____	
2306	DQ cognitive (Followup:3:DQ:cognitive) (corrected age) (K scale)	_____	
2307	DQ verbal (Followup:3:DQ:verbal) (chronological age) (K scale)	_____	
2308	DQ verbal (Followup:3:DQ:verbal) (corrected age) (K scale)	_____	
2311	Method of DQ test other than Kyoto scale (Followup:3:DQ:othermethod) (If not K scale) 1 : Bayley, 2 : Enjoji, 3 : Tsumori Inage, 4 : Others ( ____ )		
2312	DQ measured by other than K scale (Followup:3:DQ) (chronological age)	_____	
2313	DQ measured by other than K scale (Followup:3:DQ) (corrected age)	_____	
2314	Evaluation (Followup:3:DQ)	1 : normal, 2 : border line, 3 : delay	
2315	Evaluation by physician in charge DQ (Followup:3:DQ) (corrected age) 1 : normal, 2 : border line, 3 : delay		

2320	Hearing disability (Followup:3:hearing)	1:yes、2:no	
2322	Hearing aid (Followup:3:hearing:aid) (If hearing disability)	1:yes、2:no	
2323	Hearing ability (Followup:3:hearing:ability) (corrected) 1: no disability、2: moderate (40dB~)、3: sever (90dB~)		
2330	Bronchial asthma (needs medication) (Followup:3:asthma)	1:yes、2:no	
2340	Epilepsy (needs medication) (Followup:3:epilepsy)	1:yes、2:no	
2350	Home health care (Followup:3:homehealthcare)	1:yes、2:no	
2351	Home mechanical ventilation (Followup:3:homehealthcare:respirator) (If medically caring at home)	1:yes、2:no	
2352	Tracheostomy (Followup:3:homehealthcare:tracheostomy) (If medically caring at home)	1:yes、2:no	
2353	Tube or gastrostomy feeding (Followup:3:homehealthcare:tube) (If medical caring at home)	1:yes、2:no	
2354	VP shunt (Followup:3:homehealthcare:VPshunt) (If medically caring at home)	1:yes、2:no	
2355	Others (Followup:3:homehealthcare:others) (If medically caring at home) ( )		
2360	Educational training (Followup:3:educationaltraining)	1:yes、2:no	
2370	Behavioral disorder (Followup:3:behavior)	1:yes、2:no	
2372	Type of Behavioral disorder (Followup:3:behavior:abnormal) (If behavioral disorder exists) 1: ADHD/Suspected、2: ASD/suspected、3: Others ( )		

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