

HRC No.....

NNPD No.....

HIGH RISK CLINIC

Neonatology Unit, Department of Pediatrics

All India Institute of Medical sciences New Delhi

WHO Collaborating Centre for Training and Research in Newborn
Care



Baby's name _____ Date of Birth _____

Father's name _____

Address:

Present _____

_____ Phone _____

Permanent _____

_____ Phone _____

Relative's _____

_____ Phone _____

Note: Please check address and phone number on each visit. Make appropriate changes as required

Eligibility for enrolment in HRC (Tick as appropriate)

1. Birth weight <1500 grams	<input type="checkbox"/>
2. Gestation <32weeks	<input type="checkbox"/>
3. Infants with BW ≥ 1500 gm OR gestation ≥ 32 week AND	<input type="checkbox"/>
a. Intrauterine growth centile <3 rd centile	
b. Meningitis	
c. Received mechanical ventilation for 48 hours or more	
d. Hypoxic ischemic encephalopathy stage 2 or higher	
e. Major malformation	
f. Inborn error of metabolism/chromosomal or genetic disorders/intrauterine infections	
g. Symptomatic hypoglycemia	
h. Symptomatic polycythemia	
i. Retrovirus positive mother	
j. Hyperbilirubinemia requiring exchange transfusion OR Rh isoimmunization/cholestasis	
k. Abnormal neurological examination at discharge/seizures	
l. Major morbidities such as chronic lung disease, IVH grade III or more (Papile's classification), and periventricular leucomalacia	
4. Other Specify.....	

Follow up schedule

<p>Very preterm infants (<32 weeks OR <1500 g)</p> <ul style="list-style-type: none"> — Infants requiring ROP screening must be called to HRC after completion of ROP screening only. SR (ROP) is responsible for their holistic care at ROP visit itself — Every 2 weeks until a body weight of 3 kg (6, 10 and 14 week immunization visits to be covered during these visits) — At 3, 6, 9, 12, 15 and 18 months of corrected age and then every 6 months until 8 years of age — More visits if required <p>Infants with other conditions</p> <ul style="list-style-type: none"> — Babies with significant problems with breastfeeding or with significant jaundice that is likely to progress to a level requiring phototherapy to be called at 2-3 days in NHKC FU clinic — At 6, 9, 12, 15 and 18 months of corrected/postnatal age, as applicable and then every 6 months until 5 years of age — More visits if required

What should be done at follow up visit

Assessment	Corrected age in months								
	1	2	3	6	9	12	15	18	24.....5 yrs
Assessment of feeding and dietary counseling	All visits								
Growth monitoring	All visits								
Immunization	As per schedule (based on postnatal age)								
Ongoing morbidities	All visits and as and when required								
Neurological examination			*	*	*	*	-	*	*
Developmental screening	All visits								
Formal developmental assessment (DASII)			*	¶	¶	*	-	*	*
Hearing (BERA)			¶	¶	If abnormal, treatment to be advised				
Ophthalmic evaluation*	ROP screening				*	-	-	¶	¶

¶ if previous test abnormal

* If abnormal at any stage follow-up as advised by Pediatric Ophthalmologist

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HIGH RISK CLINIC FOLLOW UP AT A GLANCE

DOB:.....

Date at 40 wks PMA:

Name of Baby..... Gender..... Gestation..... wks Birth weight.....g AGA/ SGA/ LGA
Diagnosis (Attach photocopy of discharge summary)

Neonatal	Maternal

* Use corrected age (CA) for preterm infants < 37 weeks and postnatal age (PNA) for infants ≥ 37 weeks

SPECIAL CONSIDERATIONS ON FOLLOW UP

Formal developmental assessment on DASII (attach proforma at the end)

Corrected age and due date	Date of assessment	PNA/CA at assessment	Motor DQ 50 th centile	Mental DQ 50 th centile	Interpretation
3 mo					
6 mo					
12 mo					
18 mo					
Later if required					

	Date	PNA/CA	Right	Left	Remarks
Head CT/USG					
Worst ROP stage					
Hearing screening (AABR)					

S No.	Date	PNA/CA	Important events and interventions on follow up

Muscle tone norms (Amiel Tison):

Look for hypotonia /hypertonia, whether symmetric/asymmetric, and record in next table

Age (month)	Date of assessment	PNA/CA at assessment	Adductor angle	As assessed	Popliteal angle	As assessed	Dorsiflexion angle	As assessed	Scarf sign (tick)
0-3			40° -80°		80° -100°		60° -70°		Elbow does not cross midline
4-6			70° -110°		90° -120°		60° -70°		Elbow crosses midline
7-9			110° -140°		110° -160°		60° -70°		Elbow goes beyond axillary line
10-12			140° -160°		150° -170°		60° -70°		-

Overall assessment of neuromotor and developmental status

(To be recorded at 3, 6, 9, 12, 18 months of corrected age)

Date	CA	Tone	Developmental age*	Head percentile and sutures	Seizures Y/N	Involuntary movements Y/N	Vision	Hearing	Other problems**	Interpretation and advice Normal/suspect/abnormal

* GM, FM, Exp language, receptive language, cognitive/personal social

** Record here other problems such as lethargy, hyperexcitability, suck-swallow problems, drooling, behavioral problems etc.

Immunization update

- All immunization are as per the POSTNATAL AGE of the child
- Please keep a gap of 1 month between birth and 6 week vaccination

Vaccine	Schedule	Due date (fill in all due dates at first visit)	Given on
BCG+Hep B+OPV	Birth		
Pentavalent vaccine (DPT+HepB+HiB)+OPV	6 wk		
	10 wk		
	14 wk		
Measles	9 mo		
MMR	15 mo		
DPT+HiB+OPV Booster	18 mo		
Typhoid	2 years		
DPT Booster	5 years		
<i>Optional vaccines, if any</i>			

Special consultations if any:

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Early enrichment for high risk infants

Birth to 2 months	Place your baby's head and neck on the crook of your elbow and forearm while lifting or carrying her
2 to 4 months	Help your baby to roll by placing her on either side and calling her name or making a sound with the rattle from behind encouraging her to turn
4 to 6 months	<ul style="list-style-type: none"> — Play different types of music for her to listen — Make her sit in front of the mirror and imitate the sounds that she makes — Roll a medium size ball gently in front of her for her to follow — Give her small light rattles to hold in each hand — Encourage her sit by herself leaning on her arms and taking their support — Start an activity that she enjoys and then stop see if she moves her body in the same manner to indicate her desire to continue the play
6 to 8 months	<ul style="list-style-type: none"> — Give her a spoon to bang on a steel plate, small drum to bang her hand on, rattle to shake, paper to crumble and tear (please be there when she is playing with paper) — Cover your face with a plain cloth, slowly remove it and say jha or thuki, and hug her. Repeat the activities couple of times on yourself and then take her hand to pull of the cloth. Once she is familiar with the game cover her face and you pull of the cloth, clap and show excitement — Call the child by one name only and encourage her to respond by smiling at her if she looks — Make her sit independently for 5 to 10 mins by putting her brightly colored and musical toys in front of her. If she loses balance, after some time help her to sit again by holding her from the hips lightly — Encourage crawling when she is on her tummy by placing her favorite toy in front of her just a little out of her reach so that she has to stretch her hands and push herself forward — Repeat the sounds of “da da, ma ma, ga ga, ba ba” that she makes. Pretend you understand them and answer back in your mother tongue with different intonations — Keep talking to her and naming all the family members as come to her, hold or play with her
8 to 10 months	<ul style="list-style-type: none"> — Put two blocks in each hand and encourage her to bang them together while looking at them. Encourage her to clap her hands — Hold her hand and help her to take out toys one by one from a tub filled with toys. Once she has learnt to take out the toys, hold her hand and encourage her to drop the toys back into the tub one by one — When a family member leaves, ask her to wave bye bye — Take her in your lap and show her picture books with single, large, colorful pictures of everyday objects and animals. You name and point at the pictures
10 to 12 months	<ul style="list-style-type: none"> — Show her the functions of objects used in daily life, like glass for drinking mobile for talking, comb for the hair — Encourage her to hold furniture and take some step around it
12 to 15 months	<ul style="list-style-type: none"> — Take her hand and help her to point to a toy or any food item she wants. You say the name of the toy and encourage her to take out a sound resembling the name — Hold her lightly from the back and give her the confidence to take few steps on her own

Nutritional supplementation protocol

<1500 g				≥1500 g		
Supplement	Amount	Initiation	Continued till	Amount	Initiation	Continued till
Human Milk Fortifier	2g in 50 mL of milk	@ 100 mL/kg feeds	2-2.5 kg/ until direct breast feeding	-	-	-

<2500 g				≥2500 g		
Supplement	Amount	Initiation	Continued till	Amount	Initiation	Continued till
Vitamin D3 drops <i>Vitamin D 1 mL=400 IU</i>	1 mL OD	@ 100 mL/kg feeds	2 years	1 mL OD	Discharge	2 years

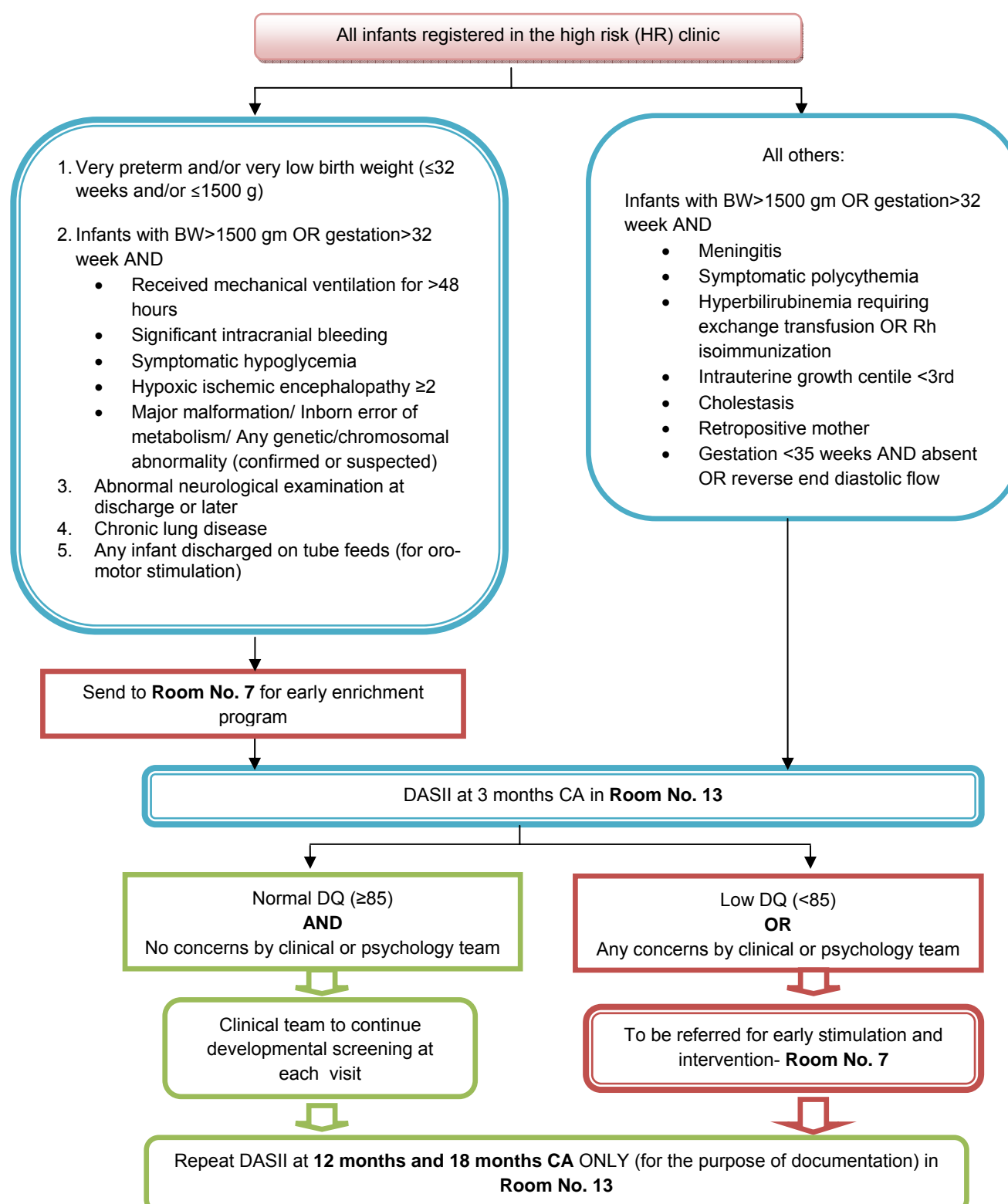
<2500 g				≥2500 g		
Supplement	Amount	Initiation	Continued till	Amount	Initiation	Continued till
Iron (2-3 mg/kg/day)	< 3 kg: 5-10 mg 0.3 mL OD** 3 to < 6 kg: 10-15 mg 0.5 mL OD**	2-4 weeks*	2 years	16-20 mg 8 drops BD (0.5 mL BD)* OR 2.5mL OD ***	6 months	2 years

*4 weeks for sick VLBW infants; **Tonoferon 1 drop =1.25 mg elemental iron (each mL (15 drops approx.) = 25 mg)
 *** Syr Vitcofol (elemental iron) 33mg/ 5 mL (dose specified, syr ferrium (elemental iron) 50mg/5 mL, iron polymaltose sucrose complex (50 mg/mL)

Guidance on complementary feeding

Age	Foods	Frequency
6-8 months	Thick, soft porridge (khichri/dalia); add sugar and oil mixed with either milk or pounded ground nuts Mixtures of mashed foods made of potatoes or millet or rice; mix with fish or beans or pounded groundnuts; add green vegetables	Breastfeeding plus 2-3 meals per day
9-11 months	-Do- Give nutritious snacks between meals like egg, banana or bread.	Breastfeeding plus 3-4 meals/day plus one snack between meals
12-24 months	-Do- Family foods, chopped or mashed if necessary	3-4 meals/day plus two snacks between meals

SOP for developmental assessment of high risk infants



Red Flags in Development of Young Children



| Loss of achieved milestone at any age is a red flag.

Gross Motor Milestones	Upper Limit
Sitting without support	9 months
Standing with assistance	12 months
Hands & Knee crawling	14 months
Walking with assistance	15 months
Standing alone	17 months
Walking alone	18 months
Unable to walk upstairs with help	2 yrs
Frequent falling	3 yrs
Can not jump	4 yrs

Fine Motor Milestones	Upper Age Limit
Unable to hold rattle	5 months
No pincer grasp	12 months
Unable to remove socks or gloves by self	20 months
Unable to scribble	24 months
Can not work simple toys (peg)	3 yrs
Doesn't draw picture	5 yrs

Language Milestones	Upper Age Limit
No babbling	12 months
No bisyllables (dada, baba)	11 months
No single word	16 months
No 2-word spontaneous phrases	24 months
Doesn't speak in sentences	3 yrs
Doesn't use pronouns	4 yrs
Can't tell name	5 yrs

Psychosocial Milestone	Upper Age Limit
No social smile	6 months
No laughing in playful situations	8 months
No waving pointing	12 months
No pretend play	3 yrs
Doesn't want to play with others	3 yrs
Doesn't make eye contact	3 yrs
Doesn't respond to peer	4 yrs
Unusually withdrawn and not active	5 yrs

Features of Autism in young children (<18mo)*

1. Poor eye contact
2. Delayed language; no single word by 16 mo
3. Lack of pointing, sharing objects of interest

Features of Autism in older children

1. Playing alone: no interest in other children
2. Repeated purposeless (stereotyped) motor activities
3. No pretend play

*Autism screen recommended at 18 months