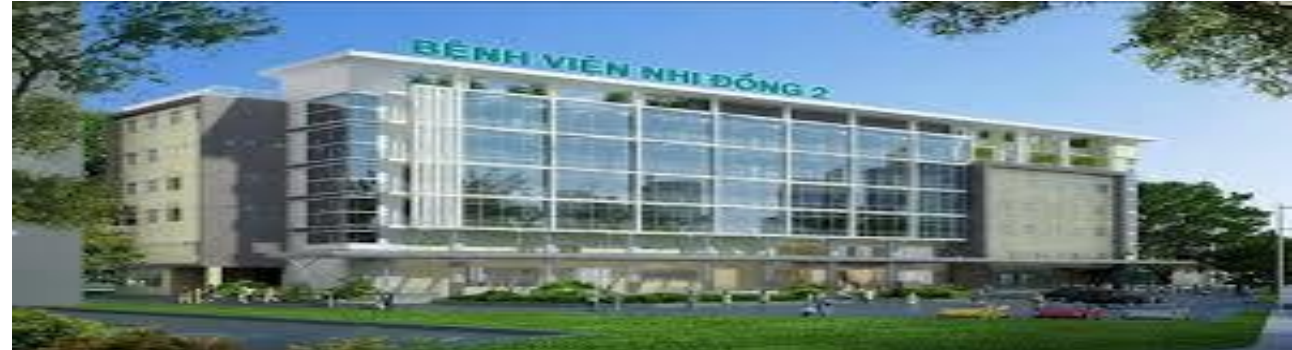




FOLLOW-UP OF HIGH-RISK INFANTS & EARLY INTERVENTION PROGRAM IN CHILDREN'S HOSPITAL 2

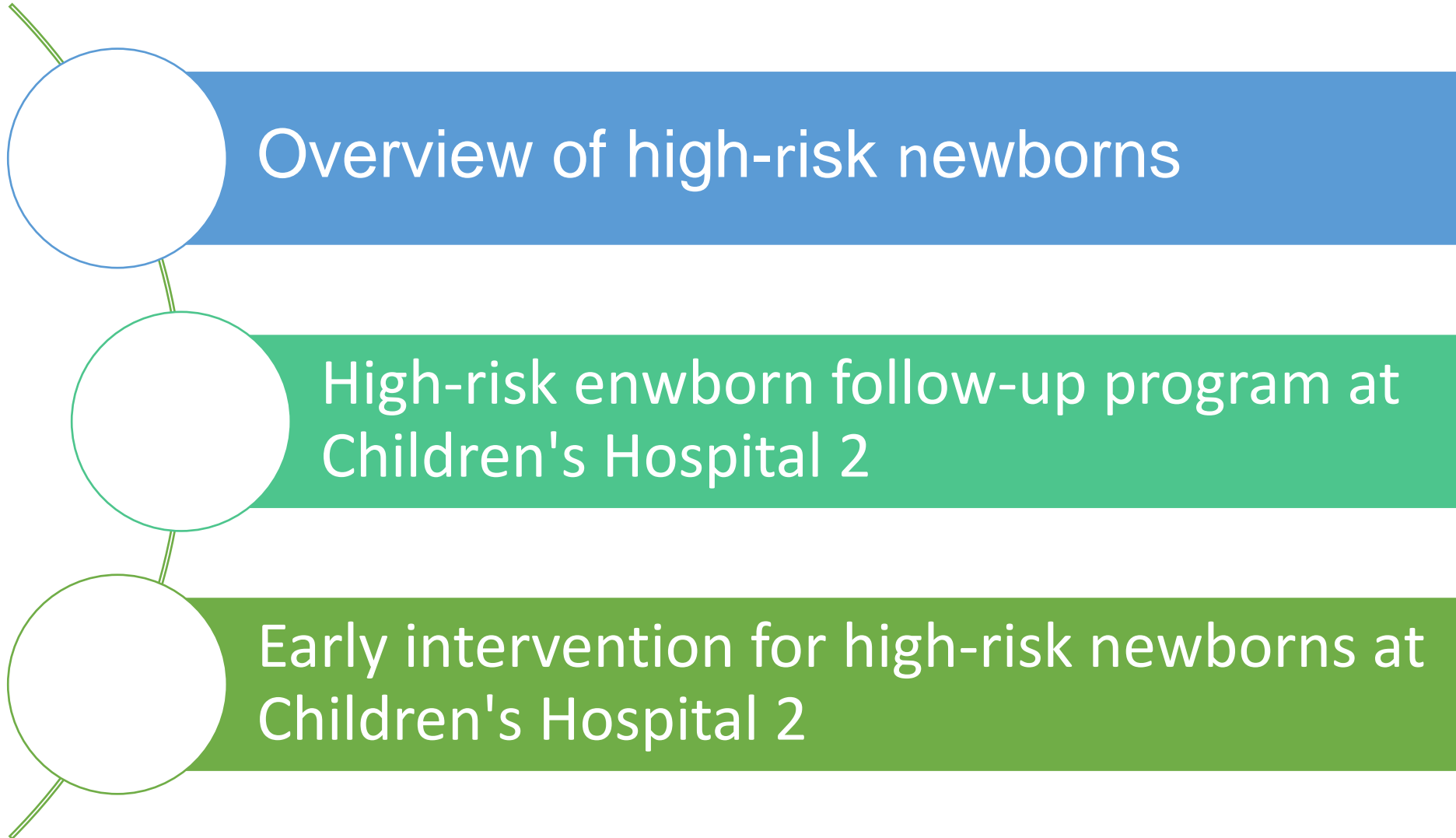
MD.PHD NGUYEN THI KIM NHI
Head of Department of Neonatology

8/11/2025





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Criteria for assessing high-risk newborns in Children's Hospital 2

1. Very premature newborns < 32 weeks.
2. Newborns with CNLS \leq 1500g.
3. Newborns with brain damage and neurological complications recorded by imaging, hypoxic/ischemic encephalopathy with hypothermia treatment, microcephaly, intrauterine growth retardation, severe jaundice.
4. Newborns with surgical intervention in the neonatal period: chest, abdomen, brain, craniofacial.
5. Newborns with confirmed or suspected metabolic disease
6. Newborns with genetic disease (excluding trisomy).
7. Newborns with reduced muscle tone not excluding genetic pathology
8. Newborns with complex congenital heart disease.
9. Life-threatening neonatal diseases: severe viral infections (Rubella, CMV, Herpes, ...), bacterial infections (meningitis, sepsis, ...), parasitic infections (Toxoplasmosis, ...).
10. Newborns on ventilators for \geq 7 days

Time frames for examination & monitoring of high-risk infants

- 38 – 42 weeks
- 3 – 6 months old
- 9 – 12 months old
- 18 – 24 months old
- 3 years old

The time of follow-up visits may vary depending on the infant's condition.

Human Resources

- Neonatologists: Department of Neonatology, NICU
- Department of Child Health Examination
- Neurologists
- Ophthalmologists, Otorhinolaryngologists
- Physicians from Department of Psychology – Physical Therapy and Rehabilitation
- Support Units/Department assist in completing the program

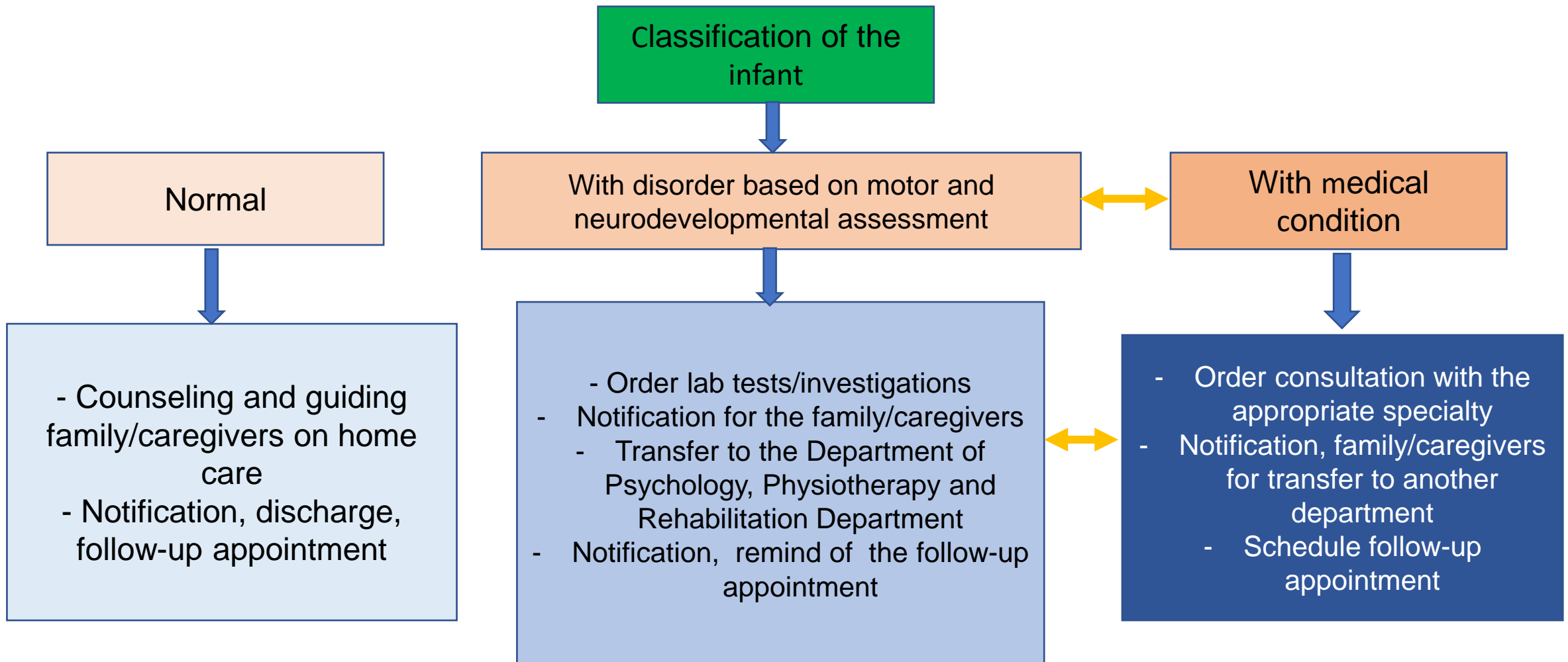
Steps to examine high-risk infants

1. Examine children according to age milestones 38-42 weeks, 3-6 months old, 9-12 months old, 18-24 months old, 3 years old.
2. Interview the child's caregiver
3. General health examination of the child
4. Neuromuscular assessment
5. Psychomotor development assessment according to age milestones
6. Hearing screening
7. Brain testing, ultrasound (if necessary)
8. Indicate vaccination according to the vaccination schedule
9. Children with movement disorders, prescribe physical therapy and schedule a follow-up visit
10. Indicate appropriate specialist examination when there are abnormalities

Examination & assessment form for infants from 38 - 42 weeks of old

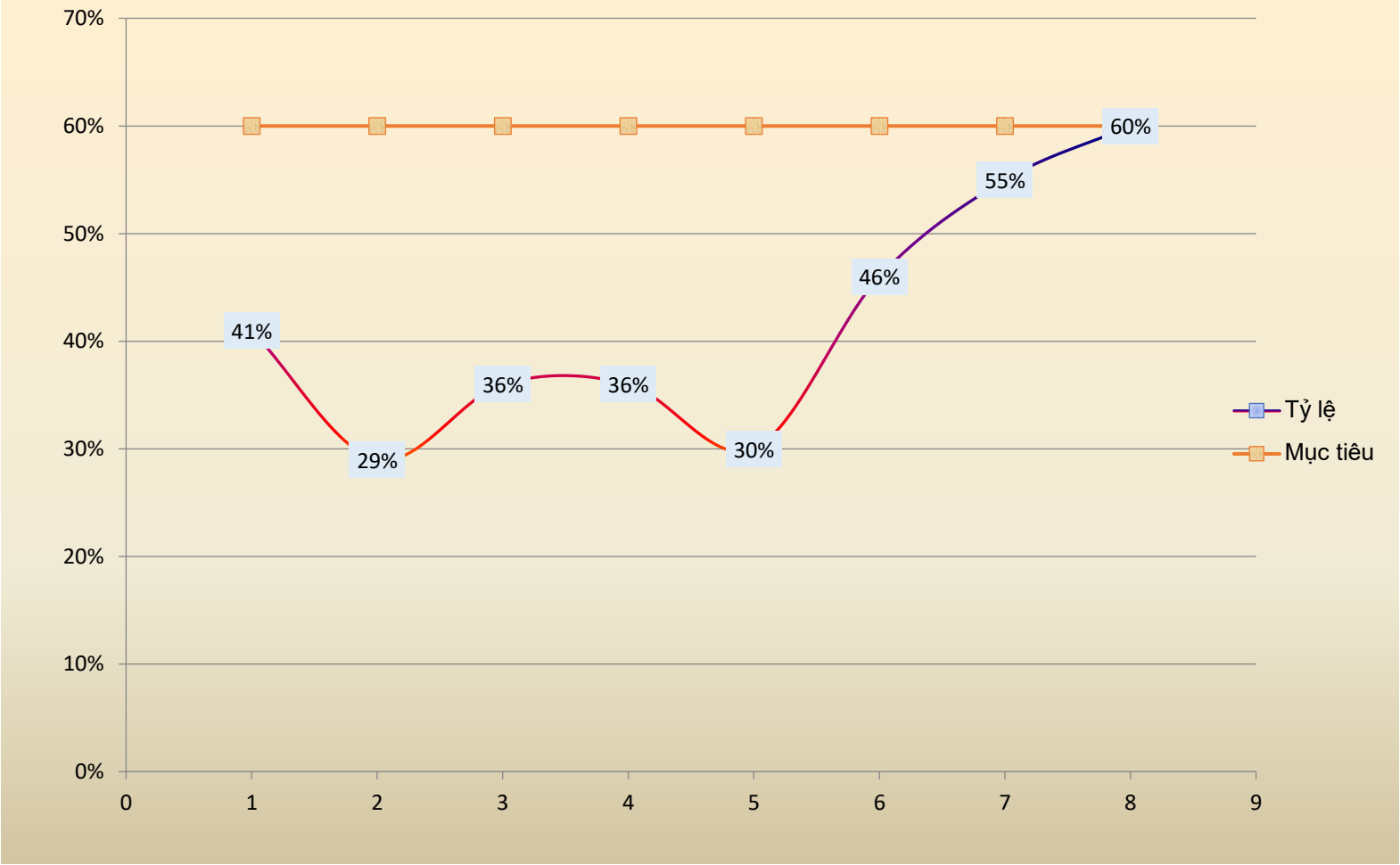
38-42 weeks Adjusted age	Name	Surname	DN	Terme	PN	Contexte
Motor	Interaction Communication	Language	Sense	Awareness	Environment	Physical
Primary reflexes Sucking grasp Reflexes automatic stepping Defense reflexes 0-1-2	Behavior Behave crying: Can it be soothed Crying: Stress response/irritability 0-1-2	Language Slurred 0-1-2	Vision Response to light Corneal reflex Object tracking Nystagmus 0-1-2	Understanding	Family Parent Family support 0-1-2	Growth Weight Height Head Circumference
Gross motor Spontaneous movement (abnormal movement) Voluntary movement synchronous/ asynchronous 0-1-2	Attention Interest in environment Head turning to stimulus Body movement/passive 0-1-2	Food Milk: type Suck – swallow 0-1-2	Hearing response to noise:speech, toys 0-1-2	Perform	Social environment Precarious living Isolation Immigration 0-1-2	Stability of the autonomic nervous system Response to environmental stimuli: apnea, rapid heart rate, paleness/redness, vomiting ...
Fine motor Opening hand Finger movement 0-1-2	Spontaneous activities	Facial expression 0-1-2	Body sense Swing 0-1-2	Predict	Physical environment Cigarettes Air Screens	Neurology Epilepsy Diagnostic Imaging EEG ...
Muscle tone Peripheral/axis tone Postural tone Tone adjustment Postural adjustment 0-1-2	Sleep Wake rhythm 0-1-2		Tactile response to touch 0-1-2		Other environment	DigestionNutritional ProblemsVomiting, Diarrhea, Bloating ...
Motor coordination Response to stimulus 0-1-2	Autonomy					Morphology head is distorted on one sideDeformation
Motor 0-1-2	Interact 0-1-2	Language 0-1-2	Sense 0-1-2	Awareness 0-1-2	Environment 0-1-2	Physical 0-1-2

Management flowchart according to high-risk infant's classification



Initial results of Examination and Follow-up Program for high-risk infants

Target:
Increased rate of follow-up
examinations for high-risk
infants at Children's Hospital 2
(2024)



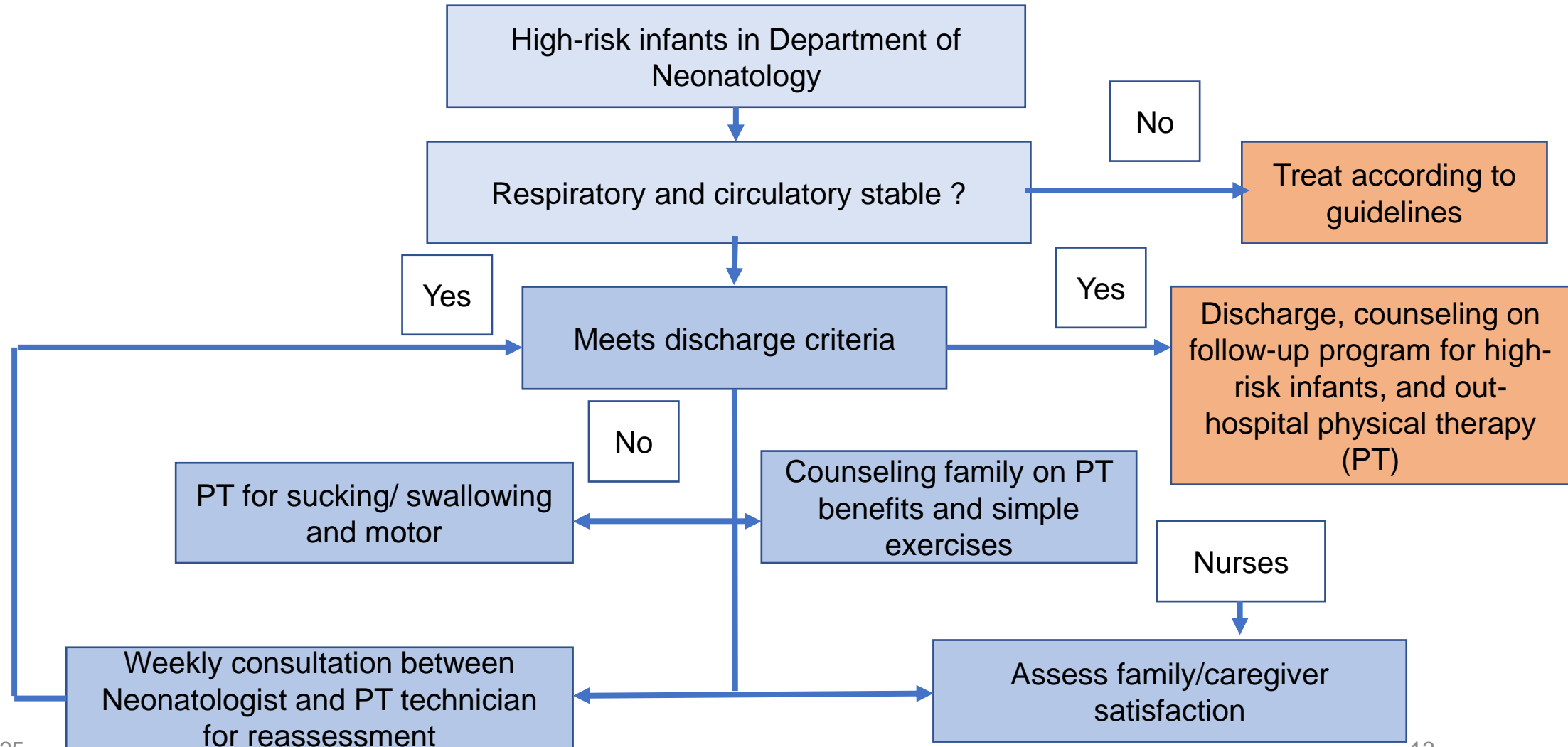
Early Intervention for high-risk infants at Children's Hospital 2

- This is one of the most important components of the high-risk Infant examination and follow-up program.
- *Personnel:* Department of Neonatology in collaboration with Department of Psychology – Physical Therapy and Rehabilitation , Children's Hospital 2.
- The aim is early intervention (especially for motor issues) for high-risk neonates who are medically stable.
- Intervention is conducted weekly (Wednesday and Friday afternoons), tailored to the infant's specific issues.
- Intervention methods are based on established protocols from Department of Psychology – Physical Therapy and Rehabilitation



Increased rate of early physical therapy intervention for high-risk infants in Department of Neonatology (2025)

Flowchart for physical therapy for high-risk infants in Department of Neonatology



Physical therapy for high-risk infants in the Department Neonatology

PT for sucking and swallowing

- Assessment of sucking and swallowing function
- Stimulation of sucking reflex
- Adjustment of feeding posture
- Use of assistive devices
- Guidance on sucking skills

8/11/2025

PT for motor

- Support proper posture
- Facilitate movement
- Stimulate sensory systems
- Prevent musculoskeletal deformities

PT for associated diseases

- Sternocleidomastoid muscle tumor
- Brachial plexus paralysis
- Clubfoot
- Thumb adduction deformity
- Hip joint abnormalities

The results of early physical therapy intervention for high-risk infants in the Department of Neonatology (2025)

Tỷ lệ trẻ sơ sinh nguy cơ cao giai đoạn ổn định được tập VLTL bú nuốt, vận động (%)



The limitations and challenges

- Properly trained personnel
- Time- consuming
- Multidisciplinary collaboration in hospitals
- Difficulties in connecting families
- Family understanding and long-term monitoring
- Long waiting- lists
-

NETWORK OF FOLLOW-UP PROGRAM FOR HIGH-RISK INFANTS

