

## HIGH RISK NEW BORN

The high risk neonate can be defined as a newborn , regardless of gestational age or birth weight, who has a greater than average chance of morbidity or mortality because of condition or circumstances superimposed on the normal course of events associated with birth and the adjustment to extra uterine existence.

### **CLASSIFICATION OF HIGH-RISK NEWBORN:-**

High risk newborns are most often classified according to size, gestational age and maturity.

#### **I. Classification according to Size**

1. Low birth weight: - birth weight less than 2500gm, regardless gestational age.
2. Extremely low birth weight: - birth weight less than 100gm.
3. Moderately low birth weight:- birth weight is 1501 to 2500gm.
4. Appropriate for gestational age (AGA) infants:- an infant whose birth weight falls between the 10<sup>th</sup> and 90<sup>th</sup> percentile on intrauterine growth curves.
5. Small for date or Small for gestational age:- whose birth weight on intrauterine curve is falls below the 10<sup>th</sup> percentile.
6. Intrauterine growth Retardation:- whose intrauterine growth is retarded.
7. Large for gestational age:- whose birth weight falls above the 90<sup>th</sup> percentile.

#### **II. Classification according to gestational age**

1. Premature infant:- an infant born before completion of 37wks of gestation , regardless of birth weight.
2. Full term infant:- born between the beginning of the 38wks and the completion of the 42wks of gestation, regardless of birth weight.
3. Post mature infant:-Born after 42wks of gestation.

#### **III. Classification according to mortality**

1. Live birth:- birth in which neonate manifest any heartbeat, brathe or display voluntary movements , regardless of gestational age.

2. Fetal death: - Death of the fetus after 20wks of gestation and before delivery, with a absence of any sign of life after birth.
3. Neonatal death: - Death that occurs in the first 27 days of life. Early neonatal death occurs in the first week of life. Late neonatal death occurs 7-27 days.
4. Perinatal mortality: - Describe he total no. of fetal and early neonatal death per 1000 live births.
5. Post natal death: - death that occurs 28days to 1 year.

### **ASSESSMENT:-**

Assessment is determining any apparent problems and identifies those that demand immediate attention. The assessment includes the assessment of Apgar score and an evaluation of any congenital anomalies and neonatal distress.

#### ***Systematic assessment:-***

A thorough systematic physical assessment component in the care of the high -risk infant. This alert nurse is aware of subtle changes and reacts promptly to implement interventions that promote optimum functioning in the high –risk neonate. Obsevational assessment of the high-risk infant are made according to the infants acuity; the critically ill infant requires close observation and assessment of respiratory function , including continuous pulse oxymetry , electrolytes and evaluation of blood gases.

Accurate documentation of the infants status is an a integral component of nursing care with the aid of continuous sophisticated cardiopulmonary monitoring, nursing assessments and daily care may be coordinated to allow for minimal handling of the infant to decrease the effects of enviourmental stress.

#### ***Physical assessment:-***

Head to foot examination (as like format)

## **NURSING CARE PLAN:-**

### ***Nursing Diagnosis:-***

*1) Ineffective breathing pattern related to pulmonary and neuromuscular immaturity, decreased energy and fatigue.*

### ***Intervention:-***

INTERVENTION	RATIONALES
<ul style="list-style-type: none"><li>- Place supine with neck slightly extended and nose pointing to ceiling “sniffing” position</li><li>- Avoid neck hypertension</li><li>- observe for deviation from desired functioning, sign of distress- grunting, cyanosis, nasal flaring, apnea</li><li>- use semi lying or prone position</li><li>- Provide prescribed oxygenation</li><li>-Maintain neutral thermal environment</li><li>-Closely monitored blood gas measurement</li></ul>	<ul style="list-style-type: none"><li>To prevent any narrowing of airway</li><li>- it reduce diameter of trachea</li><li>- to suction properly</li><li>- to prevent aspiration</li><li>- to conserve utilization of oxygen</li><li>- to prevent hypoxemia and acidosis</li></ul>

*2. Ineffective thermoregulation related to immature temperature control and decreased subcutaneous body fat*

INTERVENTION	RATIONALES
<ul style="list-style-type: none"><li>-Place the child in incubator, radiant warmer, or warmly clothed in open crib</li><li>- monitor axillary temp in unstable infants</li><li>- regulate servocontrolled unit or air temp control</li><li>- Use plastic heat shield as appropriate</li><li>- Monitor for sign of hyperthermia</li><li>-Check temp of infant in relation to ambient temp and temp of heating unit</li></ul>	<ul style="list-style-type: none"><li>- to maintain stable body temperature</li><li>- To maintain skin temp within accepted thermal range.</li><li>- to decreased heat and water loss</li><li>- to dec. radiant heat loss</li></ul>

- Avoid to expose the infant in cool - Monitor serum glucose values	- to ensure euglycemia
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*3. Risk for infection related to deficient immunological defenses*

INTERVENTION	RATIONALES
- Ensure all caregivers wash hands before and after handling the child -Ensure that all equipment in contact with infant is clean / sterile - Prevent personnel with upper respiratory tract/ communicable infections from coming into direct contact with infants - Instruct health workers and parents in infection control procedure - Administered antibiotic as ordered -Ensure strict asepsis technique while doing procedure	- to minimize exposure to infective organism

*4. Imbalanced nutrition: less than body requirements related to inability to ingest nutrients because of immaturity and / or illness*

INTERVENTION	RATIONALES
- Maintain parental fluid or TPN therapy as ordered -Monitor for signs of intolerance to TPN therapy especially protein & glucose -Assess readiness to nipple feed , especially ability to coordinate swallowing and breathing -Nipple feed infant, if strong sucking,	

swallowing and gag reflexes are present -Follow unit protocol for advancing volume & concentration of formula - Use orogastric feeding if infants tires easily or has weak gag, swallowing and sucking reflexes. - Assist mother with expressing breast milk	-to minimize risk of aspiration - to avoid feeding intolerance - Because nipple feeding may weight loss - to establish and maintain lactation until infant can breast feed.
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*5. Risk for fluid volume deficit or excess related to immature physiologic characteristics of preterm infant and/illness*

INTERVENTION	RATIONALES
- monitored fluid and electrolytes balanced with therapies that increased insensible water loss ( IWL) - Implement strategies to minimize IWL such as plastic covering, increased ambient humidity, - Assess the state of hydration - Provide parental fluid - Avoid administrating hypertonic fluids in peripheral veins - Monitored urine output	- to avoid over/dehydration - to prevent excess solute load on immature kidneys & fragile veins - for evidence of dehydration/ overhydratin

6. *Delayed growth and development related to preterm birth, unnatural NICU environment, separation from parents*

INTERVENTION	RATIONALES
<ul style="list-style-type: none"> <li>- provide optimum nutrition</li> <li>- Provide regular periods of undisturbed rest</li> <li>- Provide parents – infants interaction</li> <li>- Promote self – regulating behavior</li> </ul>	<ul style="list-style-type: none"> <li>- to ensure steady weight gain and brain growth</li> <li>- to decrease unnecessary oxygen use &amp; calorie expenditure</li> <li>- because it is essential for normal growth and development</li> </ul>

7. *Interrupted family process related to situational crisis*

8. *Anticipatory grieving related to unexpected birth of high risk infant*

INTERVENTION	RATIONALES
<ul style="list-style-type: none"> <li>- Be available to family</li> <li>- Discuss the infants illness with parents</li> <li>- Provide family to hold their child</li> </ul>	<ul style="list-style-type: none"> <li>- to provide support</li> </ul>