Handout: Newborn Resuscitation, Stabilization, & Immediate Care of the Newborn

Immediate Care of the Newborn:

1) Anticipate risk factors affecting birth outcomes

Preconception	Prenatal	Intrapartum

• Age (AMA/VYMA)
• Preexisting conditions
  • Diabetes
  • Hypertension
  • Cardiac disease
  • Anemia
  • Thyroid disorder
  • Renal disease
  • Obesity
• OB History
  • GTPAL
  • History of stillbirth or miscarriage
  • Previous infant with congenital anomalies
  • Use of reproductive technology
  • Interpregnancy spacing
• Blood type and Rh status
	• Prenatal care (when started)
	• Nutrition
	  • Weight gain
	  • Diet
	  • Obesity
	  • Eating disorders
	• Health-compromising behaviors
	  • Smoking
	  • Alcohol use
	  • Substance use
	• Blood type or Rh sensitization
	• Medications
	  • Prescription
	  • OTC
	  • Complementary & alternative
	• History of infections
	  • STIs
	  • TORCH
	  • Group B Strep
	  • Hep B or C status
		• Length of gestation
		  • Preterm
		  • Late preterm
		  • Early term
		  • Full term
		  • Postterm
		• First stage of labor
		  • Length
		  • EFM (internal or external)
		  • ROM (time, presence of mec)
		  • Signs of fetal distress (decels)
		• Group B strep status
		  • Treatment during labor?
		• Second stage of labor
		  • Length
		  • Vaginal or C/S
		  • Forceps or vacuum assisted birth
		  • Complications
		  • Shoulder dystocia
		  • Bleeding (placenta previa or placental abruption)
		  • Cord prolapse
		  • Maternal analgesia and/or anesthesia

1 Goal pre-delivery: BE PREPARED!!!

Preparation:

- Radiant Warmer
- Oxygen
- Suctioning
- Laryngoscope with light and blades
- Testing resuscitation equipment (bag and mask with adequate seal)

Immediate Care after Birth:

1) Primary goals:
    a. Regulate temperature and provide warmth
    b. Establish and maintain respirations
    c. Adjusting to circulatory changes
    d. Ingest, retain, and digest nutrients
    e. Eliminate waste
    f. Regulate weight
2) Assessments/interventions begin immediately
    a. Recognize the problems, intervene, evaluate intervention, more interventions if needed
3) Keep neonate warm
    a. Warm, dry, stimulate

4) Ongoing assessments:
    a.
    b.
    c.

Apgar Scoring-

1) Rapid assessment
2) Assesses cardiac, pulmonary, and neurosensory status
3) Obtained at 1 and 5 minutes
4) Acrocyanosis –_____
    1) caused by vasomotor instability, capillary stasis & increased Hgb

	0	1	2
Respiratory Effort	Absent		
Heart Rate	Absent		
Muscle Tone	Flaccid		
Reflex Activity	None		
Color	Blue/ pale body		

B) Apgar score
    1) 0-3

    2) 4-6

    3) 7-10

If APGARs not available, three questions clinicians want to know…

1)
2)
3)

Stabilization

1) Transition-Newborn adjusts to extrauterine life.
2) Newborn= "ABC"
3) First actions
   A) Provide warmth (Dry & Stimulate)
      -
      -
      -

4) NRP algorithm (See Handout)
   A) Airway Maintenance
      - Most secretions moved by gravity and coughed out, swallowed, suctioned, or wiped away
      - Bulb syringe
        (a)
        (b)
      - Deeper suction to remove mucus from nasopharynx or posterior oropharynx with delee suction

   B) Breathing – spontaneous and unassisted
      - Abnormal Newborn Breathing
        (a) Bradypnea
        (b) Tachypnea
        (c) Abnormal breath sounds
        (d) Audible grunting
        (e) Respiratory distress- nasal flaring, retractions, stridor, gasping, chin tug
        (f) Seesaw or paradoxical respirations
        (g) Skin color- cyanosis, mottling
        (h) Apnea >15 seconds

      - Positive Pressure Ventilation
        (a) Start with room air (____%)
        (b) Correct head position-
        (c) Ventilation rate: _____
      - No improvement of HR? MR. SOPA
        M-
        R-
        S-
        O-
        P-
        A-

      - Types of PPV- face mask with Ambu bag or T-piece resuscitator
      - Alternate airways- Intubation with ET tube or Laryngeal Mask Airway (LMA)

   C) Circulation – maintained to perfuse tissues and organs
      - Begin compressions if HR _____ AFTER 30 seconds of _____

- Increase oxygen level to 100% when starting compressions
- Compression Rate:
  - 3:1 ventilation; goal rate of _____ per minute
  - 2 thumb encircling technique or 2 finger technique
- Location of compressions:
- Reassess HR after ____ seconds of compressions

Ongoing Newborn Care:

1) Respirations
   - Count for 1 full minute
   - Normal:
   - Abnormal: grunting, flaring, retractions
2) Heart Rate
   - Normal:
3) Temperature
   - Normal:
     1) If at 36.6 or below, recheck immediately, if still low notify instructor
     2) Location:
     3) Perform last as neonate will probably cry, skewing HR and RR
4) Pulse Ox
   - Continuous for first _____ hours of life
   - Spot check after (not usually part of routine VS)
5) Vital Sign frequency
   - Q 15 min X 1 hr
   - Hourly X 2 hrs
   - Q 4-8 hrs depending on risk factors

Thermoregulation

- Cold Stress- Increases need for oxygen and can deplete glucose stores
- Heat loss in infants
  1) Thin layer of subcutaneous fat
  2) Blood vessels close to skin surface
  3) Larger body surface to weight ratios
  4) Changes in environmental temperature
  5) Immature thermoregulation center
- Heat loss Mechanisms - 4 types of heat loss
  Conduction- Loss of heat from the body surface to cooler surfaces in direct contact
  Convection- Flow of heat from the body surface to cooler ambient air
  Evaporation- Loss of heat when a liquid is converted to vapor
  Radiation- Loss of heat from the body surface to a cooler solid surface not indirect contact, but relative proximity

Quick Initial Assessment:

Quick check for anomalies

A) External assessment: skin color, peeling, birth injuries, foot creases, breast tissue, nasal patency, meconium staining, obvious anomalies (cleft lip/ palate, exposed spinal column)
B) Chest: ease of breathing, auscultation for heart rate and quality of tones, respirations for crackles, wheezes, and equality of bilateral breath sounds
C) Abdomen: rounded abdomen and umbilical cord with one vein and two arteries
D) Trunk: Patent Anus- no rectal temps until passage of first meconium
E) Neurologic: muscle tone and reflex reaction (moro reflex), palpation for presence and size of fontanels and sutures, assessment of fontanels for fullness or bulge

Infant Safety and Security:

F) Security Band on baby's ankle
    a) Infant abduction system- skin sensitive tracker with door alarms and locks
G) Mother/baby identification bands
    a) Apply ID bands to mom and baby prior to moving infant from mother's side
H) Never let baby go with someone who has no badge
I) Baby stays in room w/ mom-
J) Transport in bassinet
K) Wheels locked when not transporting
L) Assess mom's status
M) Introduce self, show badge, explain where and why taking infant
N) Baby on back to sleep, one-piece sleeper or swaddle, no blankets, bumpers, toys/stuffed animals in crib.
O) Obtain footprints

Measurements

1) Weight
    (a) AGA-appropriate for gestational age between _____
    (b) SGA-small for gestational age <_____% on growth curve
    (c) LGA-large for gestational age > _____% on growth curve
2) Length
    (a) Infant on flat surface then extend leg- top of head to bottom of heel
    (b) Caput and molding can alter measurements
    (c) Normal-
3) Head Circumference
    (a) Just above ears
    (b) Normal-
    (c) Molding can alter measurement
4) Chest Circumference
    (a) Over the nipple line
    (b) Normal-
    (c) _____cm smaller than head

Newborn Prophylaxis:

The information about these medications can all be found in your book.
This is the information you will need for your Newborn Medication Templates for clinical.

I. Vitamin K Prophylaxis
(pg. 556 Medication Guide)
   a. Action:
   b. Indication:
   c. Dosage:
   d. Adverse Reactions:
   e. Nursing Considerations:

II. Eye Prophylaxis- Erythromycin Ophthalmic Ointment 0.5%
(Pg. 555 Medication Guide)
   a. Action
   b. Indication:
   c. Dosage:
   d. Adverse Reactions:
   e. Nursing Considerations:

III. Hepatitis B Vaccine
(Pg. 564 Medication Guide)
   a. Action:
   b. Indication:
   c. Dosage:
   d. Adverse Reactions:
   e. Nursing Considerations:

Skills to review before clinical: Newborn Measurements, Gestational Age Assessment, Administering Eye Ointment, Performing a Heel Stick, and Administering Immunizations. All can be found in ATI: Engage Maternal, Newborn, and Women's Health RN → Newborn Adaptations → Skills