SCOPE OF SERVICE:

The Neonatal Intensive Care population consists of preterm to term infants with acute medical/surgical/respiratory problems requiring intensive monitoring of unstable systems.

GUIDELINES FOR ASSESSMENT AND REASSESSMENT:

Reassessment intervals and parameters are presented as the minimum acceptable times and measurements. Throughout this document, shift is defined in frequency as the starting point of when a Registered Nurse assumes care for a patient during and after receiving report. Frequency and extent of reassessments should be modified by the Registered Nurse as clinically indicated to meet the clinical needs of each patient. Patients discharged prior to these times should be reassessed prior to discharge.

Guidelines are presented as minimum evaluation criteria. Extent of assessments is based on clinical condition.

ASPECTS OF CARE	GUIDELINES OF PATIENT CARE	GUIDELINES OF NURSING PRACTICE
I. ASSESSMENT		
A. Admission Assessment	A. Patients will receive an initial assessment within 15 minutes of arrival to the unit and completed within 2 hours of admission	A. Prior to admission, the RN will assure that bedside emergency equipment is present and functioning appropriately, including: T-piece resuscitator, suction, CR monitoring and weight-based emergency drug sheet (once the weight is determined – within 1 hour). 1. Suction should be set 80-100

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	with documentation in the electronic health record (title 22; 70215). B. The nursing process begins upon the patient's arrival on the Unit with the admission assessment. This process continues throughout their admission and is consistent with the policies of Good Samaritan Hospital. C. To prevent the infant from becoming too tired and/or stressed, adapt the assessment to the neonate's tolerance and conduct assessments as swiftly and systematically as possible.	2. T-piece resuscitator: i. Settings should be set to match the infant's respiratory support settings. If the infant is off respiratory support, the settings should be: 20-25 PIP, 5 PEEP, and 21% FiO_2 ii. T-piece resuscitator will be connected to blended oxygen source with flow set to approximately 10 Lpm. B. A total physical assessment will be obtained within two hours of admission, and documented within 8 hours. 1. Vital Signs (rectal temperature, heart rate, respiratory rate, blood pressure, oxygen saturation, pain) <u>within 30 minutes of birth.</u> 2. Height, weight, and head circumference 3. Bedside glucose 4. Physical (neurological, cardiovascular, respiratory, gastrointestinal, genitourinary, integumentary, musculoskeletal, and nutrition/hydration) 5. Psychosocial 6. Allergies 7. Skin risk assessment 8. Medication history/reconciliation

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	D. Parents, family members and/or other caregivers will be included in the assessment process whenever possible.	9. Admission Criteria (standard NICU admission vs observation patient) a. The following neonates may be observed in the NICU for up to 4hr: i. Transitional Respiratory Symptoms: Tachypnea, grunting, moderate nasal flaring, moderate retractions, and/or delayed capillary refill (>3 sec) 1) Neonates with mild respiratory symptoms can remain in LD/Ante/MBU with frequent clinical assessments and bedside glucose monitoring ii. Gestational age 35 0/7 – 35 6/7 weeks iii. Five minute APGAR <5 or chest compressions given in the delivery room iv. Any other anomalies, symptoms, or perinatal risk factors that warrant close observation b. Infants with suspected transient hypoglycemia that are following the Neonatal Hypoglycemia Pathway may be observed in the NICU for up to 6hr c. Infants that require standard admission to the NICU are those infants i. Less than 35 weeks gestation ii. Infants weighing less than 1900 grams, regardless of gestation

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		iii. Those infants with known anomalies as identified prenatally & per consultation with Neonatologist d. Any other infant as deemed necessary per Neonatologist
B. Assessment and Reassessment	A. Patients will receive an assessment with assumption of care and ongoing throughout shift with a minimum of every 4 hours and documented in the patient electronic health record.	A. At the beginning of a shift and after an infant is moved to another bed space, the RN will assure that bedside emergency equipment is present and functioning appropriately, including: T-piece resuscitator, suction, CR monitoring, and weight-based emergency drug sheet (weight accurate within the past 7 days). 1. Suction should be set 80-100 mmHg 2. T-piece resuscitator: a. Settings should be set to match the infant's respiratory support settings. If the infant is off respiratory support, the settings should be: 20-25 PIP, 5 PEEP, and 21% FiO_2 (if on respiratory support, equipment settings should closely match patient's respiratory support settings) b. T-piece resuscitator will be connected to blended oxygen source with flow set to approximately 10 Lpm. B. Vital Signs: a. Required q2h minimum for infants on: 1. Nasal Cannula >2 lpm, NCPAP, NAVA, Conv vent

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		2. All central lines & umbilical lines 3. NIRS, aEEG monitoring b. Required Q4h minimum for infants on: 1. Nasal cannula 2 lpm or lessfocus c. Required q1h minimum for infants on: 1. Whole body cooling 2. HFOV or HFJV resp support 1. Temperature measurement: a. Initial rectal temperature then axillary is the preferred method for temperature monitoring. b. Hourly after initial check until within normal limits: 97.8 – 99.5 F (36.5 - 37.5 C) c. Routine temperature assessment: q4h d. For infants with minimal handling orders, the skin probe temperature reading may be used for subsequent assessments, AFTER verifying correlation of the skin probe to axillary readings at least q8h.

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		i. Axillary temperature should be re-verified if skin probe is detached from the infant or there is question of the skin probe accuracy. 2. Blood pressure: a. Non-invasive cuff pressures: daily b. Invasive arterial blood pressure monitoring system i. Invasive blood pressure and waveform: hourly ii. Non-invasive cuff pressure: q8h or whenever arterial line function is questionable (dampened waveform, inability to draw from line, etc.) iii. The transducer is zeroed upon insertion, q8h and as indicated with line changes, when the monitor interface has been interrupted, and PRN for troubleshooting. 3. Pain/sedation assessment: a. Routine pain assessment: q4h b. Before and after interventions to treat pain c. Sedation assessments (infants who received sedation since the last pain assessment and/or are on continuous narcotic drips): q4h 4. Pain Assessment:

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		a. Routine pain assessments at a minimum of q4h, before and after interventions to treat pain. 5. Pain Reassessment: a. Pain reassessment should occur within an hour post medication administration. C. Focused Assessment and Reassessment (Admission/shift Assessment) 1. Patients will receive a focused assessment of identified problems within the patient's compromised system every 4 hours. D. Admission History 1. To be completed within 24 hours. E. Subsequent Assessments: The RN will perform and document a total physical assessment q8h. A focused assessment should be performed and documented a minimum of q4h. Both total and focused assessments should be clustered with other cares, as able. Total physical assessments will include the following: 1. Neurological System 1. Head circumference measured weekly on Saturday night shift 2. Cardiovascular System

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		3. Respiratory System, including: a. For infants with ANY respiratory support device, as part of hourly rounding and PRN, the device fit, angle, tubing support, settings, and tolerance should be assessed to prevent patient injury or further respiratory distress. Documentation is not required for these routine checks unless clinically indicated. b. For infants that are unstable or on ANY respiratory support device, the respiratory system assessment should be included in the focused assessment. c. Unstable infants: document respiratory support type, device settings, FiO_2, and TCOM (if applicable) every hour d. Invasive Ventilation: document respiratory support type, device settings, insertion depth, tube position, FiO_2, and TCOM (if applicable) every 2 hours i. For invasive NAVA ventilation: EDI catheter placement should be verified q2h e. HFNC/CPAP/non-invasive NAVA: document respiratory support type, device settings, FiO_2, and TCOM (if applicable) q2h i. Every 3-4 hours, the prongs/mask should be moved to allow for a full skin assessment and determine the need for further interventions, such as barrier devices or apparatus size changes.

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		ii. For CPAP/non-invasive NAVA: the mask/prongs should be alternated q3-4h iii. For non-invasive NAVA: EDI catheter placement should be verified q2-3h 2. NC (2 Lpm or less): document respiratory support type, Lpm flow, and FiO_2 every 3-4 hours 4. Gastrointestinal System, including: a. Measure abdominal girth once each shift. b. Beginning at a PMA of 32 weeks, begin assessing and documenting oral feeding readiness cues: i. Scoring is done prior to feedings every 3-4 hours and assessed throughout the feeding. c. For infants with OG/NG tubes: i. No routine gastric residual evaluations (includes all infants, bolus feeds, and continuous feeds). ii. Perform *selective* gastric residual evaluations & notify provider based upon the following: a) Vomiting, large regurgitation b) Green or bilious regurgitation c) Abdominal distension d) Increase in ABDs e) Lethargy

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		f) Changes in vital signs from baseline **When a selective gastric residual is checked, do not discard any residuals. Refeed unless instructed otherwise by provider** 5. Genitourinary System 6. Integumentary System, including: a. Assess for breakdown associated with respiratory devices, tubes, and other medical devices. b. Using a protective skin prep and/or barrier (Cavilon/Duoderm) when securing tubes or devices, especially for ELBW, fragile, or critically ill infants. c. Using skin prep (Cavilon) for removal of adhesives and skin barriers, especially those in place for less than 24 hours. d. Diaper Dermatitis: i. Prevention: a) For infants on plain breast milk, 20-22cal formula feeds, and/or those preparing to go home try to use Aquaphor. b) For infants receiving <u>any</u> HMF, 24cal+ feeds, Prolacta, or those that have not been successful with Aquaphor, use Critic-Aid Clear.

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		ii. Treatment: c) Mild: 20-40% zinc oxide cream (i.e. Desitin or Criticaid Protective Barrier Paste). Apply a thick layer with first application. After applied, do NOT wipe away with subsequent diaper changes. Gently clean off urine/stool, but leave remaining cream as a skin barrier. Apply a more cream as needed to maintain a thick, protective layer. d) Moderate or with excoriation: use Ilex Skin Protectant Paste. Apply a thick layer with first application, and then follow with a clear ointment such as Aquaphor or petroleum jelly. After applied, do NOT wipe away with subsequent diaper changes. Gently clean off urine/stool, but leave remaining cream as a skin barrier. Apply a more cream and ointment as needed to maintain a thick, protective 7. Musculoskeletal System 8. Hydration/Nutrition, including: a. Intake: calculate ml/kg/day for every 8-hour shift and 24 hours on night shift for all infants unless otherwise indicated. Verify that the value is appropriate based on the infant's age and weight. b. Output: calculate the total urine output and ml/kg/hr every 8-hour shift and 24-hour total on night shift for infants on strict I&O. Count total diapers for

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		infants on diaper checks. Verify that the value is appropriate based on the infant's age and weight. c. Infants requiring strict I&O are those on IV fluids, respiratory support > or equal to 2lpm, diuretics and others as deemed necessary per practitioner order. Infants no longer on IV fluids, on oxygen flow <2lpm or diuretics may be converted to diaper checks per nursing discretion unless otherwise ordered by provider. d. Weigh infant every day on night shift (2300-0700) unless infant is deemed to be unstable after consultation with medical provider. i. Weight will be recorded in grams. ii. For those ventilated infants who cannot be disconnected from the ventilator, the weight of the ventilator tubing should be handled such that it does not add excess weight to that of the scale measurement, as much as possible. e. IV therapy: i. Sites will be assessed hourly for patency and appearance. ii. IV fluid intake will be documented hourly. iii. Blood glucose will be checked within one hour of hanging any new bag of fluid containing Dextrose (including TPN).

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C. Compromised System Assessment	A. A patient's system that is an alteration from their normal baseline is considered compromised.	A. RN will assess the compromised body system that is unstable or not responding to nursing interventions as expected. B. Any significant change in condition or critical event will be documented in the patient's electronic health record and reported to the provider. C. Examples of when to notify the provider include: 1. Oxygen saturation < 90% on room air 2. Respiratory rate > 100 bpm 3. Heart rate > 200 bpm or < 80 bpm 4. New or increased apnea, bradycardia, and/or desaturations 5. Retractions and/or Grunting (severe or new; not part of normal newborn transition) 6. Prolonged capillary refill > 3 seconds 7. Bloody stools, abdominal distension, vomiting, bilious emesis, or discolored abdomen 8. Suspected seizure activity
D. Postoperative and Post Procedure Assessment(s)	A. Patients will receive an assessment upon arrival in based on	A. Please refer to the Children's Services Policy "Post-operative Care of the Neonate" for more details.

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	standards described in Assessment.	
II. PROBLEM IDENTIFICATION		
A. Problem Identification	A. Patients can expect their care need(s) to be identified by the RN upon admission and on a continued basis.	A. Based on the initial assessment and routine reassessments, patient problems and/or needs will be identified on the plan of care by an RN and updated in conjunction with clinical changes and in collaboration with the physician, the patient and family, and other health care professionals.
	B. Patients can expect timely and safe interventions in the event of a critical episode.	A. The RN will anticipate and recognize potential / impending critical episodes and respond quickly and effectively, including timely notification of physician. B. The RN will provide interventions that are efficacious, timely and directed at preventing undue crisis to the extent possible given patient's condition.
III. PLAN OF CARE		
A. Plan of Care	A. Patients and families can expect a plan of care (POC) and goals to meet their problems or needs. B. A multidisciplinary approach will be utilized when appropriate for planning patient care.	A. Based on the initial assessment and routine reassessments, current patient problems and/or needs will be identified on the POC by an RN. B. The RN will initiate a POC within 8 hours of admission. C. The plan of care will incorporate interventions that are in keeping with the family's beliefs, culture, religion, and socioeconomic background whenever possible. D. The RN will review, prioritize and update the POC every shift.

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	C. Family can expect to be included in this POC. D. The RN is the coordinator of the patient's care.	
IV. INTERVENTIONS		
A. General Care and Safety	A. Patients will receive the appropriate interventions to meet their individualized needs and goals. B. Nursing interventions should be: 1. Consistent with multidisciplinary team approach and individualized patient care plan, provide continuity of care and be in accordance with established policy and procedures.	A. The nurse will utilize organizational patient safety goals to ensure patient safety, including: 1. Checking monitors for functioning of alarms and appropriateness at the beginning of each shift and after any time the equipment is taken off and resumed. 2. The RN will set physiologic alarms, such as heart rate, blood pressure, respiratory rate, and oxygen saturation per unit guidelines, unless ordered otherwise: a. HR for infants <37 weeks: High heart rate set at 200, Low heart rate set at 100 b. HR for infants >37 weeks: High heart rate set at 200, Low heart rate set at 80 c. Respiratory rate for all infants: high limit at 100, low limit at 15, apnea time at 20 seconds

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	2. Performed with safety, efficiency, and compassion. C. Patients can expect appropriate safety precautions while in the hospital. D. Patients can expect the appropriate use and size of all equipment. E. Patients can expect the clinician to manipulate invasive lines or tubes in a safe manner.	d. O_2 saturation for infants <34 weeks: high limit set at 95%, low limit set at 85% with target O_2 saturation goal 88-92% e. O_2 saturation for infants >34 weeks: high limit set at 100, low limit set at 85% with target O_2 saturation goal 92-97% i. O_2 saturation goals for infants with PPHN may be 95-100%, with the low limit set at 90% 3. Reviewing and acknowledging physician orders in a timely manner throughout the shift. 4. Reporting critical laboratory and diagnostic test result to the provider. 5. Utilizing two patient identifiers when providing care, treatment or services. 6. Completing pre-procedure checklists and time-outs. 7. Implementing evidence based practices to reduce the risk of infections. 8. Verifying a legible patient ID band is secured on patient (inside isolette for ELBW infants). 9. Allergy documentation per hospital policy. Band applied if indicated. B. Interventions to provide patient's safety related to equipment will include: 1. Phototherapy: Infants will have a mask on to cover eyes and a diaper on to shield genitalia. Light intensity will be monitored each shift (intensive phototherapy goal range of 30-40 mW/cm^2 per nm).

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		2. Bed Safety and Transport: a. All side rails on radiant warmers and/or cribs are to be up at all times, except during patient care procedures or when the provider, RN, care provider, or parents are in immediate attendance at the bedside. b. Once in an open crib, all infants will be placed back to sleep, unless otherwise ordered. Parents will be educated on the rationale and methods for safe sleep practices to be used in the hospital and at home. c. Safety straps will be used at all times when the patient is in an infant seat, swing, car seat, and/or stroller. d. An infant should never be carried as a mode of transportation outside their bed space. An isolette, bassinette, crib, or radiant warmer with side rails up must be used to transport an infant. i. Bassinets should be HOB flat during transport. ii. All infants on respiratory support will be on a pulse oximetry monitor during transport unless otherwise ordered and appropriate. 3. Code Cart: A fully stocked neonatal code cart will be readily available in the department.

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		C. Privacy and confidentiality will be maintained for the patient and family. Information will only be shared with the infant's legal guardians. Exceptions can be made on a case by case basis by the NICU management team.
B. Intravenous Access	A. Patients can expect intravenous access to be established and safely monitored.	A. All intravenous, arterial, and central access sites will be assessed hourly. B. When attempting to insert an IV, each RN may attempt a maximum of 2 times. After 3-4 total attempts (sooner if there are concerns about the ability to successfully access) or an hour has passed without access, the RN must notify the provider to discuss options. C. If an IV infiltration is noted, the RN should notify the provider and fill out an occurrence report. More information can be found in Children's Services policy "IV Infiltration".
C. Medication Administration	A. Patients can expect to have all medications given in a timely matter, with the 5 rights safety checks observed.	A. All medications, except for vitamins, Vitamin K, erythromycin eye ointment, probiotics and some diaper creams will be independently double checked with another RN on-duty. B. Medications from a glass ampule will be drawn up through a filter needle. C. IV medications (except Heparin flush and those requiring rapid IV push) will be given via an infusion pump using Guardrails. Heparin flushes should be given using a pulsatile push-pause technique. D. All small dose IV medications (<1ml) will be given via Guidelines for IV Administration for Medications LESS than 1ml volume. ***See Attached*** E. Ensure all medication containers and solutions are labeled.

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		F. To Keep open (TKO) rates will not exceed 2 ml/hr. G. All IV pumps will have the volume limit set to no more than 4 hours of fluid. H. Infants receiving corticosteroids (i.e. Decadron) will have their blood pressure and POC glucose checked every 8 hours – unless otherwise ordered. I. Maximum concentration of dextrose for use in a peripheral line is 12.5%. Central lines may infuse concentrations up to 25% dextrose.
D. Infection Control	A. Patients can expect to receive care directed at preventing hospital-acquired infections.	A. Follow infection control policies and procedures when providing care. B. Documentation of Isolation status in both Meditech & CPN upon admission, then every shift and with change in isolation status C. Utilize interventions to prevent central line infections including: 1. Scrubbing the hub for 15-30 seconds prior to accessing lines without alcohol disinfectant caps 2. Dressing and tubing changes per policy 3. All hubs not in use will be capped with disinfectant caps D. In conjunction with the provider, evaluate daily necessity of invasive lines and tubes. E. Isolettes with humidity will be changed weekly. All other patient beds will be changed every two weeks.

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		F. High touch surfaces (i.e. bedside carts, computers, phones, pumps, chairs, beds, etc…) will be wiped down with disinfecting wipes each shift.
E. Respiratory Care	A. Patients will maintain a patent airway and adequate oxygenation and ventilation as patient condition allows.	A. Oxygen and suction will be will be functioning with appropriate or ordered settings (see Assessment sections for more settings details). B. Oral/nasal suction tips will be kept covered at the head of the bed and changed out daily and PRN. 1. Oral suction catheters used with “double suction” set up are single use only C. Entire suction set up will be changed out weekly & PRN. D. All nasal cannula oxygen flow will be humidified and blended, unless low flow 100% FiO_2 ordered. E. Endotracheal suctioning: In-line suctioning is the preferred method. If not suctioned by the in-line method, the infant will be suctioned by two licensed staff (RN, RT, MD, and/or NNP) Ventilator alarms will remain on and audible at all times. 1. If the door to the room must be closed due to isolation, a mechanism for an audible alarm outside of the room must be in place.
F. Hygiene	A. Patients can expect appropriate hygiene care.	A. The RN will perform the initial bath after the infant’s condition has stabilized. 1. Delayed bathing may be offered for late preterm and term infants.

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		2. When the infant is stable, a bath schedule will be established and parent participation should be encouraged. Boys: Wednesday and Saturday / Girls: Thursday and Sunday B. The infant will receive sponge baths until the umbilical cord has fallen off and healed and the infant is able to tolerate a tub bath. C. Oral care will be performed with assessments and as needed. D. Perineal care will be given with each diaper change. E. Bed linens, clothing, and blankets will be changed daily and as needed.
G. Developmental Care	A. Patients can expect appropriate developmental care for gestation.	A. When caring for infants <1000 grams, please refer to Children's Services Policy: Extremely Low Birthweight (ELBW) Infant Care. B. The RN will explain and encourage skin-to-skin care with parents, when appropriate. Skin to skin will not be limited to a certain number of times, but rather limited by parent availability, staff support, and infant tolerance. C. The RN will promote the infant's developmental by assessing and responding promptly to the infant's behavioral cues. 1. Provide minimal stimulation (i.e. decreased light, decreased sound, gentle and minimal handing) for infants that are < 30 weeks and/or critically ill/unstable. D. Care will be planned to promote adequate sleep and rest.

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		E. Cycled lighting should be initiated for patients that are 30 weeks+ and able to tolerate additional stimulation. 1. During the 12hr lights on (around 0800-2000): some bed space or room lights should remain on and isolettes should be uncovered or covered only with a small blanket to allow light to enter through the sides of the isolette. 2. During the 12hr lights off (around 2000-0800): bed space and room lights should be kept to a minimum, except for during assessment times. Spotlights and bed space lights should be used during care times to help minimize light exposure to other infants in the room that do not need assessment. The isolettes should be covered with the full-size covers. If unable to adequately cover the isolette, eye masks could be used as an alternative for the infants. F. The RN will use positioning aides (i.e. fluidized mattress, fluidized pillow, buntings, frogs, fluidized snakes) for promoting appropriate developmental positioning. G. Developmental positioning should be used for all babies: 1. Extremities gently flexed and brought towards midline. 2. Hips and shoulders aligned. 3. Normal, relaxed neck and spine alignment. 4. Midline positioning of the head while infant supine or side-lying.

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		5. If prone, baby should be supported to ensure a normal back curvature, shoulder and hip alignment, and the head should not be facing completely to the side (90° angle). An angle >45°, can cause long-term injury, pain, and affect developmental milestones. H. The RN will follow IVH Prevention Guidelines for all babies <32 weeks gestation. More information can be found in the Children's Services Policy: Extremely Low Birthweight (ELBW) Infant Care. 1. First 72 hours after birth: a. Maintain baby's temperature >36.5 °C (97.5°F) b. Maintain neutral, midline head position i. Use the beanbag frog positioner to help in the delivery room and during admission until baby can be placed in the fluidized snake positioner. c. Head of bed elevated to 30° (or maximum allowed by bed if < 30°). This includes infants on HFOV/Jet ventilation. 2. Minimize noxious stimuli a. Reduce environment noise i. Do not talk over bedside. ii. Remind others to speak softly around bedside.

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		iii. Close and open isolette doors quietly. iv. Avoid placing objects, except for isolette covers, on top of isolette. b. Minimize handling c. Decrease light at the bedside. Cover the isolette. If light is needed for an exam or procedure, mask/cover infant's eyes prior to turning light on. d. No routine suctioning. Only PRN oral and ETT suctioning. Consider 2 person suctioning – 1 person to contain baby, 1 person to perform suctioning e. Use breast milk with oral care I. Passive range of motion will be done every 4 hours on a patient with paralysis. J. Infants in open cribs/bassinets will be positioned per safe sleep guidelines unless ordered differently by a practitioner. This includes supine positioning, no toys or stuffed animals, no loose linen, and always sleeping supine (back to sleep). 1. Transition to safe sleep starts at 32 weeks if infant has a stable temp, stable weight gain, and can tolerate air mode in isolette (refer to Children's Services policy "Thermoregulation During Transition to an Open Crib" for more details) 2. While transitioning, change one factor every 1-2 days as tolerated, including: i. HOB elevation

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		ii. Supine only positioning iii. Swaddled instead of nest iv. Remove head pillow, frog positioner, or other positioning device
H. Nourishment	A. Patients can expect to be provided nutrition as appropriate.	A. Utilize infant driven feeding algorithms as appropriate for the infant's age. B. Feeding Tube Placement Verification 1. Prior to feeding, ensure that gastric tube insertion is measuring correctly AND 2. Instill a small amount of air through the tube and auscultate over the stomach 3. If you are unsure if the tube is correctly placed using the above 2 measures or there are signs that the tube could be malpositioned (apnea, bradycardia, desaturation, coughing, or vomiting), aspirate only 1-2mL of gastric contents. a. All residual should be returned to the patient. C. Refer to the oral feeding algorithm for guidance on how to proceed based on the infant's readiness score. Infants of breastfeeding mothers must have at least 2 successful breastfeeding attempts before staff introduce a bottle. D. Use of pump for gavage feedings 1. All gavage feeds should be initiated via gravity, unless otherwise ordered 2. If infant unable to tolerate gravity feeds, RN may place feeding on a pump for up to 30 minutes. If infant requires increased pump feeding time, obtain order from the provider. 3. Considerations for pump feeds are as follows:

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		a.< 33 weeks gestation b. persistent emesis c. emesis causing apnea &/or bradycardia requiring intervention during or immediately after feeds d. persistent desaturations requiring intervention during feeds or immediately after feeds e. high risk for aspiration due to respiratory status f. high risk for aspiration due to swallow study results g. significant reflux not due to above mentioned causes h. prophylactic airway protection (e.g. TEF, severe laryngotracheomalacia) i. dysmotility, diagnosed clinically or with imaging
I. Thermoregulation	A. Patients can expect to have normothermia maintained.	A. Infants will remain on isolette skin control (ISC) until criteria met to start transition to open crib (32 weeks). Refer to Children's Services policy "Thermoregulation during transition to an "Open Crib" for more details. 1. The skin probe should be placed on an area of soft tissue on trunk of infant (to measure core temperature). Avoid boney prominences. 2. Use reflective temperature probe covers to secure the temperature probe. Do not secure with tape or another dressing. a. Cavilon (skin barrier liquid) may be used under the reflective cover for ELBW infants or those with very sensitive/fragile skin. b. Duoderm or another dressing should never go between the probe and the skin.

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		3. The skin temperature may be 0.5 degrees less than the axillary temperature. Maintain goal of 36.5-37.5C for axillary temperature. 4. Use “air boost/curtain” when opening portholes or dropping side of isolette. 5. Use portholes for infant cares, and refrain from “popping top” unless necessary. 6. For infants in humidified isolettes, the air boost should help prevent “rain out” (condensation inside the bed). If noted, wean humidity by 5% until resolved. B. Use NeoWrap on infants < 32 weeks in the delivery room **and** during admission procedures until infant able to be in closed, warmed isolette.
J. Education	A. Patients/parents can expect disease/condition specific education (i.e. prematurity, sepsis, respiratory distress syndrome) that will facilitate their understanding of their health care needs. B. Patients can expect that their family/significant other will be included in the	A. Assess the learning needs of infants’ parents and other identified caregivers. B. Provide patient and family education to include the following: 1. Orientation to department and hospital 2. Safety and security practices 3. Infection prevention practices 4. Plan of care, including: a. Current health status and treatment b. Changes in health status or treatment

ASPECTS OF CARE	GUIDELINES OF PATIENT CARE	GUIDELINES OF NURSING PRACTICE
	education whenever possible.	c. Roles of health care professionals d. Health care resources 5. Medication regimen 6. Tests, procedures and interventions 7. Pain/comfort level 8. Reinforcement of teaching by other health care disciplines. 9. Encourage patient and family participation in activities when possible. C. Initiate discharge teaching/planning upon admission, when appropriate. D. Utilize available resources and established teaching plans in providing the information required to meet identified needs. E. Initiate referrals as needed to facilitate learning. F. Document specific education provided identified needs and patient / significant others response to education in the electronic health record (either on the provided screens or in the nurses notes).
K. Psychosocial	A. Patients can expect emotional supportive measures according to hospital guidelines throughout their stay.	A. Be accepting of the patient/families' beliefs, culture, and socioeconomic background as they pertain to the patient's status.

ASPECTS OF CARE	GUIDELINES OF PATIENT CARE	GUIDELINES OF NURSING PRACTICE
		B. Implement interventions and utilize resources that are supportive of the coping mechanisms selected / requested by the families to the extent allowed by the patient's condition and within the limits of hospital policies and procedures. C. Promote the patient and family's dignity, self-respect and privacy. D. The RN will be a patient advocate.
V. EVALUATION & ACUITY		
A. Evaluation	A. Patients are evaluated following interventions to assess the effectiveness of treatment and make adjustments to the treatment plan if necessary.	A. The RN will evaluate the patient's response to medical and nursing interventions. B. The RN will document the patient's progress toward meeting expected outcomes on the Multidisciplinary Plan of Care C. The RN will evaluate the patients'/families continuing educational needs and understanding of disease process. D. Patients'/families emotional response and understanding of disease process.
B. Intra-facility transfers	A. Patients will be transferred to an appropriate level of care based upon the requirements of their current conditions.	A. The RN, in conjunction with the physician and other disciplines, will facilitate the patient's transfer to another level of care based upon the requirements of the patient's condition. B. An RN-to-RN transfer report will be completed prior to or at the time of transport. C. Transfer orders with reconciliation of medications will be completed prior to transfer.

ASPECTS OF CARE	GUIDELINES OF PATIENT CARE	GUIDELINES OF NURSING PRACTICE
		D. Patients being transferred who will continue to require cardio-respiratory monitoring will be transferred with a cardio-respiratory monitor and RN.
C. Discharge	A. Patients will receive a discharge assessment / evaluation within 4 hours prior to discharge.	A. Optional overnight stay with family prior to discharge: 1. Offered to promote confidence and facilitate teaching for the family about the infant's medical needs and any necessary use of technology to support the infant after discharge. 2. Order required from Neonatologist/NNP 3. Care of the infant remains the overall responsibility of the assigned NICU RN 4. All infants must remain on our cardiorespiratory monitoring a. The monitor in the parent lounge sleep room, can be viewed at another bedside monitor using "view other patients" and selecting the NICU Sleep Room b. The parents may <u>also</u> use the home equipment/monitor c. Educate parents on alarms and expectations overnight 5. All bedside emergency equipment should be brought with the infant to the overnight room 6. Review the feeding, medication, and care schedule with the parents 7. Round on the infant at least every 4 hours. Full assessment q8h. Focused assessment and vital signs q4h.

ASPECTS OF CARE	GUIDELINES OF PATIENT CARE	GUIDELINES OF NURSING PRACTICE
		B. The discharge assessment will include: 1. Parent/Guardian understanding of discharge instruction from nurse and care team. 2. Discharge medication reconciliation & discharge disposition
	B. Patient acuity will be assessed and scored every 8 hours per the Evalisys PCS Acuity tool and entered into the Meditech Acuity Intervention	A. The patient's need for monitoring, medications, treatments, procedures, teaching and emotional support requires routine assessments, vital signs, and/or interventions every 2-3 hours will be ranked as a Two (2) or 1:3 patient. A. Vital signs are required every 2-3 hours with a full assessment is once a shift and focused assessments every 2-3 hours B. **Medications** may include; 1. 1-2 doses of IV antibiotics/medications per shift 2. IV infusions, i.e., TPN & Lipids **C. Treatments and procedures may include;** 1. Respiratory care may include; 2. Nasal cannula-low flow, HFNC (O2 flow 1-2 LPM 3. Interventions required to manage apnea (greater than 20 seconds or greater than 15 seconds associated with bradycardia and O2 desaturation) and/or bradycardia up to 4 times per shift or 2 in a 4-hour period 4. Strict I&O 5. Lab tests as needed 6. Circumcision care 7. NG/GT to gravity or feeds via pump. 8. Vital signs are required every 2-3 hours with a full assessment is once a shift and focused assessments every 2-3 hours

ASPECTS OF CARE	GUIDELINES OF PATIENT CARE	GUIDELINES OF NURSING PRACTICE
		B. The patient's need for monitoring medications, treatments, procedures, teaching and emotional support requires interventions every 1-2 hours will be ranked as a Three (3) or 1:2 patient. A. Vital signs are required every 1-2 hours; Full assessment once per shift and focused assessments every 1-2 hours **B. Medications includes:** ~~1.~~ 3 or more IV antibiotics shift. 2. Weaning or maintenance of titratable drips 3. 1 blood transfusions per shift **C. Treatments and procedures include;** 1. Respiratory care includes; a. NAVA, HFNC greater than 2 lpm, CPAP b. Stable conventional ventilation with minimal changes (Fi)2 or ventilator setting c. Neurological monitoring: AEEG, NIRS d. Suctioning every 1-2 hours may be required e. Blood gases may be required 1-2 times per shift 2. Interventions to manage 5-12 episodes apnea and/or bradycardia per shift or 4 or more episodes in 4-hour period 3. Blood sugars may be unstable, requiring more frequent monitoring 4. Frequent dressing changes during the shift (more than 2 in a 12-hour period) 5. Drain/tube (i.e., NG/GT to suction, single chest tube with active air leak) management. D. The patient requires continual assessment and/or intervention of one of more nurses. The patient's need for monitoring, medications, treatments, procedures,

ASPECTS OF CARE	GUIDELINES OF PATIENT CARE	GUIDELINES OF NURSING PRACTICE
		teaching, and emotional support and/or interventions every 15-60 minutes will be ranked as a four (4) or 1:1 patient. • Vital signs and focused assessments are required every 1 hour or more frequently • **Medications include;** o Drips that are being titrated up o Paralytic agents o More than 1 blood product transfusions per shift • **Treatments and procedures include:** o Respiratory care includes; ▪ Nitric Oxide, JET, Oscillator or conventional ventilator requiring increasing FiO2 or frequent ventilator changes ▪ Stable Oscillatory ventilation, JET ventilation” ▪ Suctioning every 1 hour or more frequently, ▪ Blood gases are required multiple times per shift ▪ Interventions to manage greater than 12 episodes of apnea, bradycardia, and/or desaturation per shift, or 6 episodes in a 4-hour period o Exchange transfusion o Therapeutic Hypothermia o Blood sugars every 30 minutes to 1 hour – starting insulin or titrating insulin up o Chest tube insertion and/or 2 more chest tubes with active air leak o Bedside procedures requiring 2 RN’s for 1-2 hours (PICC Line insertion) o Off unit procedures for greater than 2 hours o Surgical procedure

ATTACHMENTS

A. IV Medication Administration For medications LESS than 1mL

REVIEW PERIOD

These Department Guidelines of Care will be reviewed and revised as necessary.

[redacted] BSN, RNIV, RNC-NIC

Attachment A

IV Medication Administration

For medications LESS than 1mL

Simple Med Line (1.2mL total line volume)

0.32mL (clave)
0.55mL (microbore tubing)
+ 0.32mL (clave)
1.2mL (total line volume)
- [red] (med volume)
[green] (additional prime volume)

Med Line with Bi/Tri-fuse (1.8mL total line volume)

0.32mL (clave)
0.55mL (microbore tubing)
0.6mL (bi/tri-fuse)
+ 0.32mL (clave)
1.8mL (total line volume)
- [red] (med volume)
[green] (additional prime volume)

Basic Component Volumes:

- Clave: 0.32mL
- Microbore Tubing: 0.55mL
- Bi/Tri-Fuse: 0.6mL

Administration Steps:

- **In an established med line for a medication LESS than 1mL:**
  - Always do the math to determine how much additional priming volume you need
    - Only prime to the clave closest to the patient (distal to any vascular access devices)
  - Push the small volume medication into the tubing at the clave at the distal end of the microbore tubing (by the IV pump)
  - Scrub the hub again, attach a flush, and program the additional priming volume using the Guardrails "flush" option
    - This is just priming, *not* med administration
    - It can run at a rate you feel your patient can tolerate (typically over 1 – 5 min)
  - After the priming completes, with the flush still attached use Guardrails to program the ordered medication volume, rate, and time
  - Follow with a 0.3-0.5mL flush using the "restore" rate setting
- **In an established med line for a medication GREATER than 1mL:**
  - Attach the medication syringe to the clave at the distal end of the microbore tubing (by the IV pump)
    - Do NOT push the med in or add priming volume
  - Program the ordered medication under Guardrails with the ordered volume, rate, and time
  - Follow with a 2mL flush using the "restore" rate setting
- **If y-ing in a < 1mL medication to your primary line, either:**
  - Hang a new med line (using the med to start priming) – OR–
  - Push in the medication, administer per Guardrails, and use "restore" to flush the full line volume afterward

Example for Simple Med Line (<1mL med volume): Caffeine 5mg/kg is to be given to an 800gm infant. Dose is 4mg. It comes up from pharmacy at 20mg/mL, so the final medication volume is 0.2mL.

Simple Med Line (1.2mL total line volume)
0.32mL (clave)
0.55mL (microbore tubing)
+ 0.32mL (clave)
1.2mL (total line volume)
- 0.2mL (med volume)
1mL (additional prime volume)

Example for Med Line with Tri-fuse (<1ml med volume): Caffeine 5mg/kg is to be given to an 800gm infant. Dose is 4mg. It comes up from pharmacy at 20mg/mL, so the final medication volume is 0.2mL.

Med Line with Bi/Tri-fuse (1.8ml total line volume)
0.32mL (clave)
0.55mL (microbore tubing)
0.6mL (bi/tri-fuse)
+ 0.32mL (clave)
1.8mL (total line volume)
- 0.2mL (med volume)
1.6mL (additional prime volume)