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VCH Moon Desk 322-0963 (Fax 936-4698)
VUH MR 322-4861 (Fax 343-5723)
Pod A MR 6-8808 (Fax 875-0614)
VCH Fishbowl 6-4591
VUH Fishbowl 4-5707

VCH APP Office 2-0536 or 6-4749 (BA) or 6-4750 (BB)
Stahlman APP Office 3-7911 or 3-7908
Green Office 6-3444 or 6-3409
Clarksville NICU 931-502-3118
Maury NNP Office 931-490-7062 (phone 931-490-7175)
Transport Office 2-0851 or 6-4579

Pagers/Phones
Attending phone: 838-3291
Fellow Phone: 200-4792
Transport NNP: 835- 9411 (phone 200-4761)
White APP: 835-1301 (phone: 594-0091)
DRS: 835-7494 (phone: 584-7515)
Blue A: 831-4298 Blue B: 831-4013
Green A: 831-6409 Green B: 831-6509
Red APP: 835-9438
High Census Float: 835-0385

Attending Offices
White 2-0556 Green 5-5912 Yellow 3-8107
Blue 6-4757 Red 6-4768

Charge Nurse VCH office: 6-4686 (phone 522-9700)
Charge Nurse VUH desk: 3-9892 (phone 522-9701)

More Frequently Used Numbers 2

Blood Bank VUH	2-2233	VCH Pharmacy	2-0708
Blood Bank VCH	2-9443	TPN Rx	6-7227
Lab	5-5227	X-ray Rdg Rm	875-7323
X-ray Pager	835-5652	Airway phone	516-2833
Chaplain (routine)	6-0425	Airway phone	509-4988
Chaplain (emerg)	835-1012		

Pods

A	7-6378 or 2-5994	F	6-4663 or 2-5775
B	5-0715 or 5-0588	G	6-4664 or 2-5776
C	6-4660 or 2-5795	H	6-4665 or 2-5778
D	6-4661 or 2-5796	I	6-4666 or 2-5779
E	6-4745 or 2-5797	J	6-3031 or 2-5537
Rm 1	2-0564 or 2-0565	Rm 5	3-7752 or 6-9008
Rm 2	2-0566 or 2-0567		

Call 11111

Questions Are:

What is your emergency? ECMO Stat

Where is your emergency? ECMO VCH 4th Floor NICU

Is the patient breathing? No, ECMO needed

Medical or Cardiac? ECMO Cardiac or ECMO Medical

Room? Give room number

Also provide Patient Last Name and Patient Weight

Emergency/RSI Medications **4**

Epinephrine (0.1mg/ml) IV: 0.01-0.03 mg/kg/dose (0.1-0.3mL/kg)

Epinephrine (0.1mg/ml) ETT: 0.1 mg/kg/dose (1 mL/kg)

RSI

Atropine IV: 0.02 mg/kg IV (no minimum dose)

Fentanyl IV: 1-4 mcg/kg IV given over 3-5 minutes
we usually give 1-2 mcg/kg

Rocuronium IV: 1 mg/kg OR **Vecuronium IV:** 0.1 mg/kg

Delivery Room Saturation Goals

Pre-ductal SpO_2 Target

1 min	**60%-65%**
2 min	**65%-70%**
3 min	**70%-75%**
4 min	**75%-80%**
5 min	**80%-85%**
10 min	**85%-95%**

Common Documentation Buzz Words 5

****In general, try to avoid at risk, rule-outs, suspected, probable, possible diagnoses – these are not able to be coded. If at risk diagnoses are used, remember to change the at risk diagnosis (IVH, PDA) to a confirmed diagnosis if infant develops disease****

- On admission, can put respiratory distress syndrome in the newborn - type unknown. **THEN** put specific type in later
    - Respiratory distress syndrome in the newborn Type I (this could be both a baby who received surfactant or one who was managed only with CPAP)
    - Respiratory distress syndrome in the newborn Type II (*i.e. TTN*)
- Primary failure to expand terminal respiratory units (*i.e.* the baby who requires support after RDS but not yet BPD - the 7-28 day baby on support)
- Respiratory failure due to *lung hypoplasia secondary to prematurity, CPAM, etc.*
- Bronchopulmonary Dysplasia or Chronic Lung Disease
- Cardiac failure due to hypotension
- Feeding problems in the newborn due to *prematurity, NEC, NAS, etc.*
    - We don't need a Vitamin D deficiency problem – just put dates of Vitamin D use with feeding information
- Newborn esophageal reflux
- Infection
    - Suspected sepsis (*i.e*. rule outs; if you must use this also include *due to chorio, PPROM, fever, etc*.)
    - Presumed sepsis (*i.e.* clinical sepsis; include *due to elevated CRP, clinical symptoms, increase WBC*)
    - Sepsis due to _____organism
- In-utero drug exposure (include specific drug, tobacco)
- NAS (infants who require pharmacologic treatment OR who develop symptoms and require non-pharmacologic treatment)
- Immature retinas (or ROP, if it develops)
- Breech presentation

Surveillance

- The following NICU admissions will be screened for MRSA:
    - Babies with known maternal MRSA+ status or active skin/soft-tissue infection (done on admission): get surveillance nasal MRSA culture, contact isolation until results are known; remain on isolation if MRSA+
    - Babies **greater** than 7 days old admitted to NICU: Get surveillance MRSA culture; contact isolation until results are known; remain on isolation if MRSA+
- All babies whose immediate family is MRSA positive: MRSA surveillance will be performed **weekly (Mondays)**
    - **EXCEPTION:** The baby is currently on mupirocin or is <72 hours from completed course of mupirocin
- For babies <1000 g with sepsis evaluation: should have nasal swab for MRSA colonization status to tailor antibiotic use; no contact isolation while result is pending; contact isolation and cohorting if MRSA positive

Interventions

- For **all patients** resulting positive for MRSA
    - Contact isolation
    - If < 1000 grams or treat with mupirocin TID for a 5 day course to nares and umbilical & perianal area if UAC/UVC present
    - Re-culture nares for MRSA 3 days after completion of therapy; Repeat Mupirocin treatment TID for a 5 day course IF the repeat nasal culture is positive; if baby remains MRSA positive following second treatment, no further treatment is indicated; Move the baby to a new (clean) isolette on day 5 of mupirocin treatment.
- For all babies ≤ **1000 grams with umbilical lines:**

Prophylactically treat with mupirocin TID for the duration of the umbilical line to the nares, perianal, open lesions, and umbilical stump including portion of UVC/UAC exiting the stump; ALL to wear gloves for infants ≤ 1000 grams.

Fluconazole Prophylaxis 7

Criteria:

- <25 completed weeks gestational age or
- <28 completed weeks gestational age with additional risk factors (antibiotics >48 hours, poor skin integrity, have or expected to have GI surgery)
- Exclusion: Liver failure
- Fluconazole dose: 3 mg/kg IV twice weekly (Mon/Thurs) starting on DOL 1 for up to 6 weeks

Discontinue Fluconazole Prophylaxis:

- after completion of 6 weeks of age
- if infant receives empiric antifungal therapy ≥ 48 hours
- if SGOT or SGPT ≥ 250 IU/L
- if central vascular catheter is removed. Restart fluconazole prophylaxis if new central vascular catheter has been placed prior to 6 weeks of age

IM Vitamin A Protocol

Criteria: Patients <1000g and <30 weeks gestation

Aquasol A IM: 2000 units IM Q MWF x 12 doses

Transfusion Threshold Recommendations 8

Routine transfusions: Recommendations according to hemoglobin levels (g/dL) for VLBW neonates.

Special circumstances to discuss with attending/team: ECMO, acute blood loss or excessive phlebotomy losses, severe hypoxia, preoperative patients, congenital heart disease

Special considerations to discuss with attending/team: use of diuretics after transfusion, feeds during transfusions

Postnatal age in days	Ventilated	On oxygen or CPAP	Off Oxygen
First day	≤ 11.5	≤ 11.5	≤ 10
1-7	≤ 10.5-11.5	≤ 10	≤ 9
8-14	≤ 10	≤ 9	≤ 8
15 or greater	≤ 9	≤ 8	≤ 8

- Routine/screening head ultrasounds should be obtained on infants <32 weeks gestation at 7 days of age to detect IVH.

- A routine HUS is also obtained at 30 days of age on infants <32 weeks gestation to detect PVL.

- Need for near-term imaging should be discussed with medical team.

- Preterm infants of greater gestational age should undergo a HUS only if there are clinical concerns of IVH

- VLBW infants with a normal HUS at 7 days of age do not need a repeat HUS until DOL #30 unless clinical concerns develop.

- Infants with a Grade I or II IVH without ventricular dilation need a follow-up HUS at DOL #30 or at the time of DC/BT, or sooner for an abnormally increasing head circumference.

- Infants with ventricular dilation need a follow-up HUS weekly or as clinically indicated until ventricular size has stabilized.

ROP Screening **10**

Eye drops: Proparacaine 0.5% (administered by ophthalmologist)
Cyclomydril (administered by nursing)

All infants ≤31 weeks gestation at birth or <1500 grams BW should be screened for ROP. Selected infants >30 weeks with an unstable clinical course (*i.e.* NEC, IVH, sepsis) may also be screened by Attending request.

Attending may also excuse infants who are >32 weeks but SGA and <1500 grams from ROP screening if they have been quite stable, as these infants are at very low risk.

Infants should be screened at 31-36 weeks PMA

Timing of ROP exams

Gestational age	Weeks PMA	Chronologic Age
22 weeks	31weeks	9 weeks
23 weeks	31 weeks	8 weeks
24 weeks	31 weeks	7 weeks
25 weeks	31 weeks	6 weeks
26 weeks	31 weeks	5 weeks
27 weeks	31 weeks	4 weeks
28 weeks	32 weeks	4 weeks
29 weeks	33 weeks	4 weeks
30 weeks	34 weeks	4 weeks
31 (at attending request)	35 weeks	4 weeks
32 (at attending request)	36 weeks	4 weeks

Indomethacin Prophylaxis 11

Criteria:

- Gestational age <31 weeks
- all AGA infants with BW <1000 grams
- Infants BW 1001-1250 grams who require mechanical ventilation @ 12 hours of life
- Mothers DID NOT receive Indocin within 72 hours of delivery

Qualify Labs/Data

- Platelet count >50,000
- Infant has voided

Dose at 12 hours of Life: Indomethacin 0.2 mg/kg x1 (given over 30 minutes, avoid using UAC)

Treatment of PDA with Acetaminophen

Starting dose: 15 mg/kg IV or PO every 6 hours IV given over 15 minutes

On day 3 of treatment:

1) Acetaminophen level, level should be obtained 4 hours after A.M. dose; goal level is 20 – 30*
2) AST, ALT
3) 2D-echocardiogram**

*Levels may be flagged as toxic because usually used for toxicology screen. Hepatic CYP enzyme system has low activity in newborns so risk of toxicity is low. If levels are 10 – 20, can increase dose to 17.5 mg/kg every 6 hours. If level less than 10, can increase dose to 20 mg/kg every 6 hours.

**If PDA still open by echo and still felt to be clinically significant, can continue acetaminophen (adjust dose as above if necessary). Repeat monitoring and echo day 6 of treatment. Can continue for another 3 days (after the 6 days) if duct still open (9 days total).

Helpful resource: www.bilitool.org

Preterm phototherapy guidelines

Gestational age in weeks	Initiate phototx: total bilirubin (mg/dL)	Exchange transfusion: total bilirubin (mg/dL)
<28 0/7	5 - 6	11 - 14
28 0/7 – 29 6/7	6 - 8	12 – 14
30 0/7 – 31 6/7	8 - 10	13 - 16
32 0/7 – 33 6/7	10 - 12	15 - 18
34 0/7 – 34 6/7	12 -14	17 - 19

*from M J Maisels, J F Watchko, V K Bhutani, and D K Stevenson (2012)

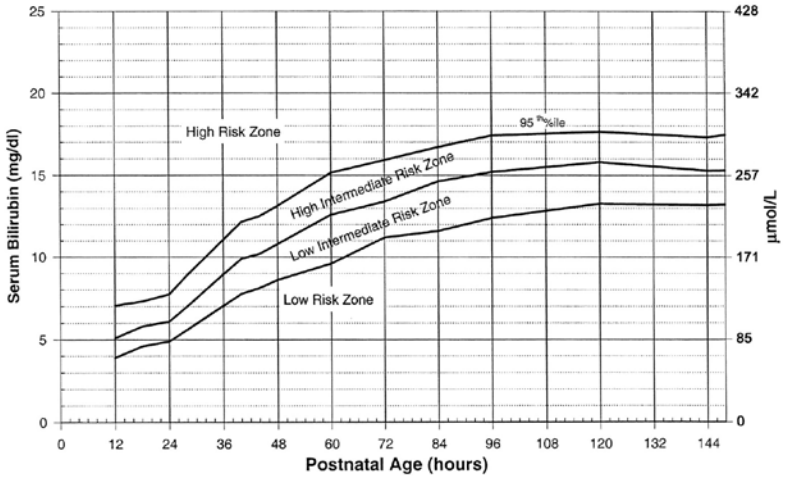
Preterm Phototherapy Considerations:

- Use PMA age with above chart
- Be mindful of hour of life bilirubin is drawn; it may be appropriate to start phototherapy early for an infant with elevated bilirubin shortly after birth
- Low intensity for infants <1000g

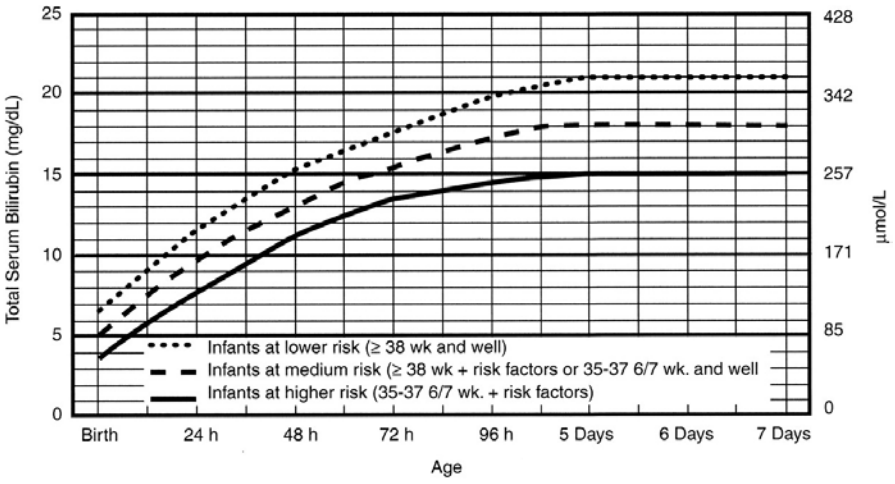
Helpful resource: www.bilitool.org

*from Pediatrics (July 2004), Volume 114 / Issue 1

Nomogram for designation of risk for well infants ≥ 36 weeks



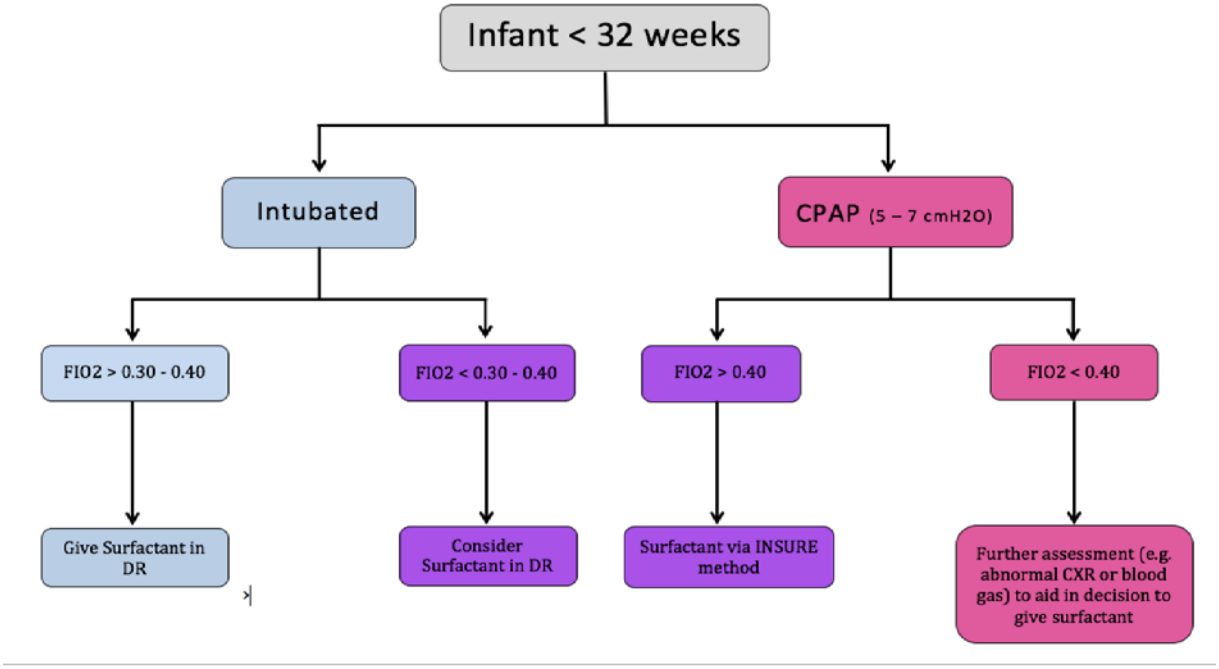
Guidelines for phototherapy for hospitalized infants ≥ 35 weeks



- Use total bilirubin. Do not subtract direct reacting or conjugated bilirubin.
- Risk factors = isoimmune hemolytic disease, G6PD deficiency, asphyxia, significant lethargy, temperature instability, sepsis, acidosis, or albumin < 3.0g/dL (if measured)
- For well infants 35-37 6/7 wk can adjust TSB levels for intervention around the medium risk line. It is an option to intervene at lower TSB levels for infants closer to 35 wks and at higher TSB levels for those closer to 37 6/7 wk.
- It is an option to provide conventional phototherapy in hospital or at home at TSB levels 2-3 mg/dL (35-50mmol/L) below those shown but home phototherapy should not be used in any infant with risk factors.

Guideline for Initial Dose of Surfactant **14**

- Both bubble CPAP as well as surfactant should be available at all deliveries of patients ≤ 32 weeks gestational age.
- Infants ≤ 32 weeks should receive surfactant if they have respiratory distress syndrome as evidenced by FiO2 ≥ 0.4 to maintain oxygen saturations ≥ 88% at 15 minutes of life or beyond, respiratory distress, chest x-ray, and/or blood gas.
- Do not give surfactant if patient is actively being resuscitated.



Respiratory pathways when initiating ventilation 15

****See VUNeo for complete guidelines for pathology-based respiratory care pathways****

There are two exceptions to these guidelines: chronic lung disease and diaphragmatic hernia – See VUNeo for guidelines for those disease processes.

Ideally, a conversation will occur with provider and RT to determine collaboratively the best vent settings.

Default Settings:

a. Mode: PC-PSV with volume guarantee
b. Initial set tidal volume: 5 ml/kg
c. Pressure limit: Initial set at 23 cmH_2O (to limit at 18)
d. Inspiratory time max: 0.6 seconds
e. PEEP: 5 cm H_2O
f. Respiratory rate: High enough to ensure minute ventilation of 200-300 ml/kg/min; approximately 40-50 breaths/minute

Additional Pressure Limit Recommendations:

- Preterm RDS: Initial set at 23 cmH_2O (to limit at 18); after CXR, set at 25-30 cmH_2O (to limit at 20-25)
- Term RDS/Pneumonia/MAS: Initial set at 25 cmH_2O (to limit at 20); after CXR, set at 30 cmH_2O (to limit at 25)
- Post-op/ procedure: Initial set at 25 cmH_2O (to limit at 20); after CXR, set at 30-35 cmH_2O (to limit at 25-30)
- Neurologic disease/apnea: Initial 23-25 cmH_2O (to limit at 18-20); after CXR, set at 25-35 cmH_2O (to limit at 20-30)

Also consider adjustments to TV (5-6 ml/kg), PEEP (5-6 cmH_2O), inspiratory time (0.4-0.6 sec) based on infant weight, ventilator loops, and clinical condition.

From Bunnell Life Pulse High Frequency Ventilator: Quick Reference Guide (bunl.com)

http://www.bunl.com/uploads/4/8/7/9/48792141/204_quick_reference_guide.pdf

SETTING	USUAL	WHEN TO RAISE	WHEN TO LOWER
HFV PIP	whatever produces desired PCO_2	To lower PCO_2.	To raise PCO_2. (Raise PEEP simultaneously to keep MAP and PO_2 constant.)
HFV Rate	420 bpm (neonates) 300 bpm (peds)	To decrease PCO_2 in smaller patients; or To increase MAP and PO_2.	To eliminate inadvertent PEEP by lengthening exhalation time or To increase PCO_2 when weaning.
HFV I-Time	0.02 sec	To enable Jet to reach PIP at low HFJV rates in larger patients (> 15 kg).	Keep at the minimum of 0.02in almost all cases.
IMV Rate	0 – 3 bpm	To reverse atelectasis or dilate restricted airways (5-10 bpm)	To minimize volutrauma, especially when air leaks are present, or To decrease hemodynamic compromise.
IMV PIP	PIP necessary to get adequate chest rise	To reverse atelectasis or dilate airways; PIP may be > or < HFJV PIP.	To minimize volutrauma, especially when air leaks are present, or To decrease hemodynamic compromise.
IMV I-Time	0.4 sec	To reverse atelectasis or dilate airways.	To minimize volutrauma, especially when air leaks are present, or To decrease hemodynamic compromise.
PEEP	7 – 12 cm H_2O (Neonates) 10 – 15 cm H_2O (Peds)	To improve oxygenation and decrease hyperventilation. To find optimal PEEP: Raise PEEP until SaO_2 stays constant when switching from IMV to CPAP.	Lower PEEP only: – when it appears that cardiac output is being compromised; or – when oxygenation is adequate and – when lowering PEEP doesn't decrease PaO_2.
FIO_2	< 0.60	Raise as needed after optimizing PEEP.	Lower FIO_2 in preference to PEEP when weaning until FIO_2 < 0.3.

From Pocket Guide: 3100A High Frequency Oscillatory Ventilation (carefusion.com)

http://pages.carefusion.com/rs/carefusioncorporation/images/RC_3100A-pocket-guide.pdf

This chart is excerpted from the operator's manual as an aid to executing your ventilation and oxygenation strategies.

Clinical indicator		Therapeutic intervention	Treatment rationale
FiO_2 above 0.60			
High $PaCO_2$ with:	PaO_2 = acceptable PaO_2 = low PaO_2 = high	Increase ΔP Increase mPaw, ΔP, FiO_2 Increase ΔP, decrease FiO_2	Increase ΔP to achieve optimal $PaCO_2$ Adjust mPaw and FiO_2 to improve O_2 delivery Decrease FiO_2 to minimize O_2 exposure
Normal $PaCO_2$ with:	PaO_2 = acceptable PaO_2 = low PaO_2 = high	No action Increase mPaw, ΔP, FiO_2 Decrease FiO_2	No action Adjust mPaw and FiO_2 to improve O_2 delivery Decrease FiO_2 to minimize O_2 exposure
Low $PaCO_2$ with:	PaO_2 = acceptable PaO_2 = low PaO_2 = high	Decrease ΔP Increase mPaw/FiO_2, decrease ΔP Decrease FiO_2, ΔP	Decrease ΔP to achieve optimal $PaCO_2$ Adjust mPaw and FiO_2 to improve O_2 delivery Decrease FiO_2 to minimize O_2 exposure
FiO_2 below 0.60			
High $PaCO_2$ with:	PaO_2 = acceptable PaO_2 = low PaO_2 = high	Increase ΔP Increase FiO_2, increase ΔP Increase ΔP, decrease mPaw	Increase ΔP to achieve optimal $PaCO_2$ Increase FiO_2 to improve PaO_2 Decrease mPaw to reduce PaO_2
Normal $PaCO_2$ with:	PaO_2 = acceptable PaO_2 = low PaO_2 = high	No action Increase FiO_2 Decrease mPaw, FiO_2	No action Increase FiO_2 to improve PaO_2 Decrease mPaw and FiO_2 to reduce PaO_2
Low $PaCO_2$ with:	PaO_2 = acceptable PaO_2 = low PaO_2 = high	Decrease ΔP Increase FiO_2, decrease ΔP Decrease mPaw, decrease ΔP	Decrease ΔP to achieve optimal $PaCO_2$ Decrease ΔP and increase FiO_2 to improve $PaCO_2$ Decrease mPaw

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Bubble CPAP Discontinuation Guidelines 18

For infants ≤ 32 weeks corrected gestational age who are on bubble CPAP (excluding patients on ventilator support for > 14 days):

- Recommend to continue bubble CPAP until at least 5 days on peep of 5 with FiO2 21% *AND* **32 weeks** corrected age
- If clinically stable and above criteria met, recommend room air trial
    - If infant begins having desaturations, increased work of breathing and/or tachypnea, resume bubble CPAP (consider trial off in another 3-4 days)

For infants ≥ 32 weeks gestational age at birth who are on bubble CPAP (excluding patients on ventilator support for > 14 days):

- Recommend to continue bubble CPAP until peep 5 with FiO2 consistently at 21%
- If clinically stable and above criteria met, recommend room air trial
    - If infant begins having increased work of breathing, tachypnea and/or desaturations, resume bubble CPAP (consider trial off in another 1-2 days)

OI = (FiO2 X MAP) / PaO2 X 100

FiO2 = Fraction of inspired oxygen

MAP = Mean Airway Pressure

PaO2 = Partial pressure of arterial oxygen

An OI >40 despite optimal medical management is an indication for potential ECMO.

Dexamethasone Taper for Chronic Lung Disease 20
(modified DART Protocol)

Day	
1	0.1 mg/kg/dose IV Q 12H
2	0.1 mg/kg/dose IV Q 12 H
3	0.075 mg/kg/dose IV Q12H
4	0.075 mg/kg/dose IV Q 12H
5	0.05 mg/kg/dose IV Q 12H
6	0.05 mg/kg/dose IV Q 12H
7	0.025 mg/kg/dose IV Q 12 H
8	0.025 mg/kg/dose IV Q 12 H

**The risks and benefits of dexamethasone must be considered, as evidence indicates an association with adverse neurodevelopmental outcomes and steroids to treat CLD.

Dionne JM, Abitbol CL, Flynn JT (2011 & 2012). *Pediatric Nephrology*

Post conceptual age	50th %tile	95th %tile	99th %tile
44 weeks			
SBP	88	105	110
DBP	50	68	73
MAP	63	80	85
42 weeks			
SBP	85	98	102
DBP	50	65	70
MAP	62	76	81
40 weeks			
SBP	80	95	100
DBP	50	65	70
MAP	60	75	80
38 weeks			
SBP	77	92	97
DBP	50	65	70
MAP	59	74	79
36 weeks			
SBP	72	87	92
DBP	50	65	70
MAP	57	72	77
34 weeks			
SBP	70	85	90
DBP	40	55	60
MAP	50	65	70
32 weeks			
SBP	68	83	88
DBP	40	55	60
MAP	49	64	69
30 weeks			
SBP	65	80	85
DBP	40	55	60
MAP	48	63	68
28 weeks			
SBP	60	75	80
DBP	38	50	54
MAP	45	58	63

If Finnegan score > or = to 8 x 2-3 measurements, continue non-pharmacologic measures and consider pharmacologic management.

NAS Level	NAS Score	Morphine dose (0.4 mg/ml concentration)
1	8-10	0.04 mg/kg/dose Q 3 hrs
2	11-13	0.06 mg/kg/dose Q 3 hrs
3	14-16	0.09 mg/kg/dose Q 3 hrs
4	≥ 17	0.11 mg/kg/dose Q 3 hrs

Rescue does of oral morphine: 0.05mg/kg/dose x 1

***See VUNeo for adjunct therapy and weaning protocol.

For infants who were ≤1500g birth weight, not on antibiotics within 24 hours of PICC removal, and who have had their PICC duration ≥ 21 days:

Give one dose of Vancomycin at time of PICC removal.

Initial Treatment of Hepatitis B Exposed or Unknown Maternal Status **24**

**for follow-up testing and recommendations: See CDC Red Book

Maternal Status	BW <2000g	BW >2000g
Hep B positive	• Hep B vaccine **and** HBIG within 12 hours of birth • Do NOT count birth dose as part of 3-dose vaccine series	• Hep B vaccine **and** HBIG within 12 hours of birth
Hep B unknown	• Hep B vaccine **and** HBIG within 12 hours of birth • Do NOT count birth dose as part of 3-dose vaccine series	• Hep B vaccine within 12 hours of birth • Per CDC, some experts would administer HBIG within 7 days if maternal status still unknown (this is generally what we do at VCH)

Routine Immunization Recommendations

CDC Website:
https://www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf

Asymptomatic Neonate Born to Mother With Active HSV (C-section or Vaginal Delivery) 25

Primary Infection (mother with no h/o HSV)

Labs: timing of labs can be discussed with medical team; AAP recommends labs at ~ 24 hours of age; consider obtaining labs earlier if infant becomes clinically ill, PROM >4-6 hours, or preterm)

- Surface cultures
  - swab specimens from conjunctivae, mouth, nasopharynx, and rectum for viral culture
  - Positive cultures from these sites that are obtained >12-24 hours after birth indicate viral replication (i.e. active infection) as opposed to contamination from intrapartum exposure.
- Swabs/scrapings of skin lesions for viral culture
- CSF for HSV PCR, cell count, chemistries
- Blood for HSV PCR
- Serum ALT

Start Acyclovir: 20 mg/kg/dose IV Q 8 -12 hours (dosing duration is determined by gestation age and DOL – refer to VUNeo or pharmacy for additional details)

Secondary Infection (mother with h/o HSV)

Labs: Obtain surface cultures and blood HSV PCR at ~ 24 hours
If asymptomatic: Do not start acyclovir
If cultures or PCR positive: obtain other labs listed above and start Acyclovir

- Premature infants born at < 30 weeks or <1000g BW
- Start at ~32 weeks
- Larger premature infants with neurologic complications of prematurity (Grade III-IV IVH, PVL, or ventriculomegaly)
- Term or near-term infants with prolonged hospitalization. PT/OT consultation should occur when infant is medically stable but has remained in the NICU ≥ 2 months.
- NAS

**Complete list of recipes is located on NICU nursing resource website.

EBM with Neosure:

22 cal/oz: 3 oz breastmilk and ½ teaspoon Neosure powder

24 cal/oz: 3 oz breastmilk and 1¼ teaspoons Neosure powder

26 cal/oz: 3 oz breastmilk and 2 teaspoons Neosure powder

28 cal/oz: 3 oz breastmilk and 2¾ teaspoons Neosure powder

30 cal/oz: 3 oz breastmilk and 3¼ teaspoons Neosure powder

Common Discharge Formula Recipes

Neosure 22 cal/oz: Refer to directions on can

Neosure 24 cal/oz: 2 scoops Neosure powder and 3½ oz water

Neosure 26 cal/oz: 3 scoops Neosure powder and 5 oz water

Neosure 28 cal/oz: 2 scoops Neosure powder and 3 oz water

Neosure 30 cal/oz: 3 scoops Neosure powder and 4 oz water

RSV – Palivizumab (Synagis) Prophylaxis 28

RSV Season is generally Nov – Mar but NICU leadership will provide information regarding when to start/end RSV prophylaxis

- In the 1st year of life for infants born <29 weeks GA
- In the 1st year of life for infants born <32 weeks GA with CLD (need for >21% FiO2 ≥ 28 days after birth)
- May administer in the first year of life to infants with hemodynamically significant heart disease (infants with cyanotic cardiac disease should have consultation with a cardiologist for prophylaxis recommendations).
- May administer up to a maximum of 5 monthly doses during the RSV season in the 1st year of life. Qualifying infants born during the RSV season will require fewer doses.
- Prophylaxis recommended in the 2nd year of life ONLY for those who require ≥ 28 days of supplemental oxygen after birth and who continue to require medical intervention (supplemental oxygen, chronic steroids, diuretics).
- Monthly prophylaxis should be DISCONTINUED in any child who experiences a breakthrough of RSV hospitalization.
- Children with pulmonary abnormality or neuromuscular disease that impairs the ability to clear secretions from the lower airways MAY BE CONSIDERED for prophylaxis in the 1st year of life.
- Children < 24 months who will be profoundly immunocompromised during the RSV season MAY BE CONSIDERED for prophylaxis.
- No prophylaxis recommended (due to insufficient data) for children with Cystic Fibrosis or Down Syndrome.
- Prophylaxis not recommended for prevention of RSV nosocomial disease.

Patient Criteria for NICU to Acute Care Floor Transfers:

- ≥ 28 weeks gestation at birth
- ≥ 2 kg
- Normal temp in open crib x 2 days
- No apnea x 7 days; no bradycardia or desaturation events during sleep
- B/D events with feeds only are acceptable if little to no intervention required to recover
- NG feeds are acceptable
- TPN/PICC acceptable
- NC flow no more than 1 LPM
- No blended oxygen
- Notification and agreement by consultants
- LOS anticipated to be > 48 hours
- Monitoring needs on the floor should be considered and conveyed to AC/receiving team

Steps of transfer process:

1. Identify if PCP has admitting privileges (Search for PCP in Synergy; click on name and admitting status will pop up)
2. Place patient in the queue
3. AC will contact CSL with bed and team assignment
4. Give report to accepting resident. Please send patient folders to receiving team.
5. Discuss transfer with family PRIOR TO MOVING PATIENT.
6. Orders for transfer must be written BEFORE patient is moved.

- Aerosolized Infasurf: There are two cohorts – #1 infants who received traditional surfactant early and are now extubated and <24 HOL, and #2 infants >1 HOL and < 24 HOL who have not received surfactant and are not intubated.
- SASSIE: Use of surfactant and steroids in extremely preterm infants; this is a pilot dose escalation trial to determine dosing of Budesonide. Qualifying infants are 23 to <28 weeks gestation on DOL 3-14 and intubated.
- HEAL: Use of high dose erythropoietin in babies with HIE undergoing therapeutic hypothermia.
- MRI-based Quantitative Brain Oxygen Metabolism in Newborns: Emily's study; looking at MRI findings in relation to anemia.
- NTRA-2112 Study: Testing the efficacy and safety of oral insulin use on intestinal malabsorption in preterm infants.
- HIP Trial: Dr. Blakely's inguinal hernia study to determine best timing of hernia repair (early vs. late repair).
- SMOF lipids: Safety and efficacy of SMOF (Soybean oil, MCT, Olive oil, and Fish Oil) compared to Intralipids. Qualifying infants expected to require parental nutrition for at least 28 days who have D.bili < 0.6 mg/dL.
- Omegaven: Alternative to Intralipids for infants who have D.bili > 2.5 mg/dL.
- PACU Handoff Training Study: Looking at improving communication between NICU and OR team.

NICU Developmental Follow-up Clinic criteria

- <1500 grams or <32 weeks gestation
- HIE
- Brain anomaly: Spina bifida, congenital hydrocephalus, any malformation
- Stroke
- Seizures
- ECMO
- Cyanotic Congenital Heart Defect (if discharged from NICU)

TEIS Guidelines

- < 30 weeks gestation
- 30-36 weeks gestation may also qualify if they meet other criteria for high risk for developmental delay
- NAS who required treatment
- HIE

Nurses for Newborns

- Serves Davidson, Maury, Montgomery, Rutherford, Sumner and Williamson counties
- Referrals for medically fragile infants (includes NAS), high risk caregiver, teen parents

Infants on RA or NC: will be intubated **in OR** by anesthesia team

Infants on VT (of any flow amount) or greater support will be intubated in NICU

- Use **CUFFED ETT** but leave the cuff deflated after intubation. However, prior to intubation, do check the cuff to ensure it is working properly and then deflate. FYI: the cuffs come from the package partially inflated. Cuffed ETT are located in all red intubation boxes.
- **ENT patients are the exception to this protocol** – they will be intubated in the OR. Infants on high O2 or VT will be transitioned to BCPAP for transport to OR.
- **Infants with significant cardiac lesions:** Place peds cards anesthesia consult **1**-2 days prior to procedure.
- **Questions**: Anesthesia PATCH NP or AIC is the contact person for questions regarding the pre-op intubation plan
    - PATCH NP phone: 615-516-1508
    - PATCH NP pager: 615-835-7935
    - AIC: 6-0027