NICU Graduates – Care After Discharge

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Disclosure:

“Within the past 12 months, I have had no financial relationships with proprietary entities that produce health care goods and services.”
Growth & Feeding

Expected “catch up” growth
Head growth
SGA infant growth patterns
Breastmilk, formula, solids:
- Fortified breastmilk
- Preterm formula
- Caloric density
- Formula till 1 yr corrected
- Solids – based on corrected age & developmentally ready
- Recent new issue – Vitamin D deficiency
Feeding problems:
- Decreased stamina
- Oral aversion
- Reflux

BPD – refers to unresolved lung disease following acute lung injury in the neonatal period

Hypoxemia (O2 saturations <95%) in BPD most commonly results from abnormal ventilation/perfusion relationship

Management:
- More a reflection of style than of science
- Differs greatly from center to center
• Supplemental oxygen
• Diuretics
• Inhaled steroids (preferred with spacer)
• Bronchodilators

• Weaning only one thing at a time
• Keeping O2 saturations at least 95% with multiple activities
• Low saturations, tachypnea, increased work of breathing lead to poor growth which slows resolution
• CXR not normal for several years
• Chronic hypoxemia – can cause or contribute to pulmonary hypertension and lead to cor-pulmonale
• Hypoxemia usually corrected by administration of supplemental O2

• No data that establishes absolute minimum oxyhemoglobin saturation allowable that will prevent cardiovascular complications or growth failure
• As a guideline normal saturations 95-98% should be goal of therapy
• Systemic hypertension can occur, often resolves without treatment
Common health/illness concerns:
Respiratory
• Colds last longer
• Wheezing more common
• Asthma risk greater for positive family history of asthma

Management:
• Bronchodilator, oral steroids, may need to increase O2 if already on O2
• Inhaled steroids not meant for intermittent use
• Respiratory panel to R/O influenza that should be treated with Tamiflu
• If test for RSV and test positive, then can no longer receive Synagis and bronchiolitis management will be the same if RSV positive or negative
• Chronic respiratory meds should not be discontinued right after an acute URI is resolved.
Immunizations:
- Very important to be given at 2, 4 and 6 months chronological ages
- Flu shot as soon as 6 months old

Anemia:
- Less common with adequate Fe intake from formula or multivitamin for breastmilk feeds
- Multivitamin with iron supplement when primarily on breastmilk or fortified breastmilk
- If transitioning from breastmilk to formula, should be at least 80% formula before stopping the vitamin-iron supplement
Developmental concerns:
• Correction for prematurity till age 2
• For gestational age of 26 weeks or less – needs longer time to catch up (usually to 30 months)
• Assessment without correction – will be delayed and undue concern and worry some for parents who often are already worried about developmental delay

• Formal testing highly recommended, not just parent questionnaires (and using corrected age questionnaires)
• Gross motor delays common initially – especially for infants with BPD and cardiac defects
• Lack of stamina for physical activity with BPD & those with cardiac defects
• Infants with frequent illnesses, especially during winter months will have slower developmental progress

Full term infants with severe medical problems in the neonatal period and prolonged hospital stays will show delays initially
Tone abnormalities early on:
• Preterm increased tone greatest over first few months, peaks at 3-6 months, then begins to resolve
• Term infants more often hypotonic early on

Greatest risk factors for delays:
• Very low birthweight
• Prematurity
• Grade III & IVH, IVH, PVL
• Seizures
• Birth asphyxia
• Congenital infections
• In utero drug exposure
Vulnerable child syndrome:
- Parent child interactions abnormal
- Discipline issues
- Not setting limits
- Parents not in control
- Parents giving in and over indulgence

Sleep issues:
- Co-sleeping
Long term issues:
• Learning disabilities
• ADHC
• Behavior