

Clinical Guidelines for Late Pre-term Birth

Clinical Management of the Late Preterm Newborn

The late preterm infant can vary widely in physiologic maturity between 34 weeks, 0 days and 36 weeks, 6 days with the risk of illness and death inversely proportional to gestational age. Those risks that are a result of immaturity can be aggravated if not properly managed in the immediate postnatal period. A number of clinical assessments and interventions are required for the preterm infant. Timely appropriate care can prevent some occurrences of complications and minimize the impact of others.

The American Academy of Pediatrics has published a reference article reviewing the developmental and physiologic immaturity that puts the infant at risk and the criteria that must be met prior to infant discharge. This resource should be referenced until the CPS guidelines for the management of the late preterm infant become available (currently in development).

Another excellent resource is the Nursing Assessment and Care of the Late Preterm Infant, Evidence-Based Clinical Guidelines, Association of Women's Health, Obstetric and Neonatal Nurses.

In the following table these two guidelines pertain to every recommendation; additional guidelines are identified where relevant:

Rationale	Recommendation(s)	Evidence
The physical maturity of the infant and the weight for gestational age will establish the baseline risk for complications	<u>Assessment/Confirmation of Gestational Age:</u> Obtain an early assessment of gestational age and weight for gestational age.	Engle, W A., Tomashek, K M. and Wallman, C. Late Preterm Infants: A Population at Risk. <i>Pediatrics</i> 2007;120;1390-1401 DOI: 10.1542/peds.2007-2952 http://pediatrics.aappublications.org/content/120/6/1390.full.html
The preterm infant requires careful monitoring after birth.	<u>Monitoring of Vital Signs:</u> Routine assessment for temperature, heart rate, respiratory rate, types of respirations, muscle tone and activity: <ul style="list-style-type: none"> • every 30 minutes until they have 	

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	<p>remained stable for 2 hours, then</p> <ul style="list-style-type: none"> • every 4 hours for 24 hours and then • every eight hours until discharge. 	
<p>If a newborn is not kept warm a cascade of negative physiologic events may occur. A cold infant will shiver and use up sugar and fat stores. The cold infant is at risk of low blood sugar which will weaken them and make breastfeeding difficult, further decreasing blood sugar to the point where an intravenous or tube feeding might be required.</p> <p>Fat metabolism increases the production of free fatty acids which compete with bilirubin in binding to albumin and could potentially increase the risk of jaundice.</p> <p>Kangaroo care has many advantages which begin with thermoregulation, promotion of coordinated movement, early and continued breastfeeding and minimizes the risk of cold, feeding problems and hypoglycemia.</p>	<p><u>Thermoregulation:</u> Provide Kangaroo care as early as possible after birth and for as long as possible.</p> <p>Kangaroo care is the process of placing the unclothed infant (except for a diaper) directly against the mothers bare front torso so the infants mouth is just slightly higher than the nipple, and covering mother and infant together with mother’s shirt or blanket as appropriate.</p>	<p>Association of Women’s Health, Obstetric and Neonatal Nurses (2010) Nursing Assessment and Care of the Late Preterm Infant, Evidence-Based Clinical Guidelines</p> <p>White, L., Duncan, G., Baumle, W. Foundations of Maternal & Pediatric Nursing (2010), 3rd Edition. Cengage Learning Inc.</p>
<p>CPS Screening guidelines for newborns at risk for low blood glucose http://www.cps.ca/english/statements/FN/fn04-01.pdf</p> <p>Late preterm infants may lack coordination which contributes to difficulty in breastfeeding.</p> <p>Early breastfeeding provides the infant with improved immune protection.</p>	<p><u>Feeding Support:</u> In-hospital support and assessment is required to establish breast feeding and avoid hypoglycemia and dehydration.</p>	<p>http://www.cps.ca/english/statements/FN/fn04-01.pdf</p>
<p>Preterm infants may be eligible for the respiratory syncytial virus vaccine and parents should be made aware of the process their physician must follow to apply for the vaccine.</p> <p>A developmental assessment should be recommended to the</p>	<p><u>Parent Education:</u> Staff member assigned to review:</p> <ul style="list-style-type: none"> • potential problems and how to identify them • care and feeding requirements 	

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<p>parents to be undertaken by a paediatrician at a prematurity follow-up clinic or by a developmental paediatrician.</p>	<ul style="list-style-type: none"> • available resources • eligibility for RSV vaccine and how to obtain it • timing of and referral process for developmental assessment 	
<p>Management of the infant at increase risk for sepsis http://www.cps.ca/english/statements/FN/FN07-03.pdf</p> <p>Additional details in sepsis screening were developed by the PCMCH Maternal-Newborn Advisory Committee’s Infection Prevention and Control Work Group and can be found on the PCMCH website. http://www.pcmch.on.ca/pdf/Prevention%20of%20Group%20B%20Strep%20Infection.pdf</p> <p>Maternal antibody transfer is not complete until term. In addition factors present during delivery such as prolonged rupture of membranes contribute to the risk of sepsis.</p>	<p><u>Risk of Sepsis:</u> Careful assessment for clinical and laboratory signs of sepsis is critical for this population.</p>	<p>http://www.cps.ca/english/statements/FN/FN07-03.pdf</p> <p>http://www.pcmch.on.ca/pdf/Prevention%20of%20Group%20B%20Strep%20Infection.pdf</p>
<p>In comparison to the term infant a preterm infant has a 2.4 times greater risk of developing hyperbilirubinemia. In addition, it peaks later in life at 5 to 7 days instead of the 3 to 4 day peak in the term infant.</p> <p>The CPS guidelines should be followed for detection, management and prevention of hyperbilirubinemia in term and late preterm newborn infants (35 or more weeks gestation)</p>	<p><u>Increased Incidence of Hyperbilirubinemia:</u></p> <ol style="list-style-type: none"> 1. A risk assessment for the development of severe hyperbilirubinemia must be completed prior to discharge 2. Follow-up to be arranged as necessary 	<p>http://www.caringforkids.cps.ca/pregnancy&babies/Jaundice.htm</p> <p>Guidelines for detection, management and prevention of hyperbilirubinemia in term and late preterm newborn infants (35 or more weeks’ gestation), POSITION STATEMENT (FN 2007-02), Paediatric Child Health Vol 12 Supp B May/June 2007</p> <p>http://www.cps.ca/english/statements/FN/FN07-02.pdf</p>

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<p>The American Academy of Pediatrics has published a reference article reviewing the developmental and physiologic immaturity that puts the infant at risk and the criteria that must be met prior to infant discharge.</p> <p>The hospital providing delivery services is responsible for ensuring that all patients have access to follow-up for bilirubin testing, results, treatment and monitoring.</p>	<p><u>Discharge Criteria:</u></p> <ol style="list-style-type: none"> 1. A minimum of 48 hours hospital stay is recommended for infants born late preterm. 2. Stable vital signs for at least 12 hours prior to discharge 3. Feeding established and successful for 24 hours; no hypoglycemia 4. Vaccination and screening as required, such as Hepatitis B vaccine, newborn metabolic and genetic screening, and hearing assessment 5. Ensure there is follow-up for bilirubin testing, monitoring and treatment. 	<p>Engel, W.A., Tomashek, K.M., Wallman, C. "Late Preterm Infants: A population at Risk. Pediatrics 2007; 120; 1390-1401</p>
	<p><u>Post Discharge:</u></p> <ol style="list-style-type: none"> 1. A follow-up visit and access to a physician's care within 24 to 48 hours post discharge. 2. Services identified to support the late preterm infant must include the coordination of care for the monitoring and treatment of hyperbilirubinemia and breastfeeding support. 	