1.0 PURPOSE AND INTENT

1.1 To standardize car seat safety assessment practices for newborns amongst the neonatal units in the WRHA.

1.2 To promote safe transport for infants identified as at risk for adverse cardio-respiratory events while in a car seat

Note: All recommendations are approximate guidelines only and practitioners must take into account individual patient characteristics and situation. Concerns regarding appropriate treatment must be discussed with the attending neonatologist.

2.0 PRACTICE OUTCOME

2.1 To identify infants who are at risk for adverse cardio-respiratory events while in a car seat to test for readiness for discharge (previous history of cardiorespiratory events that have resolved), and to test for transport readiness.

3.0 DEFINITIONS

3.1 Cardio-respiratory events are defined as any one of the following:
   - Apnea: a respiratory pause ≥ 20 seconds.
   - Bradycardia: heart rate less than 80 beats per minute
   - Desaturation:
     - Oxygen saturation (SpO2) < 85% for > 20 seconds, or
     - Oxygen saturation (SpO2) < 80% for > 10 seconds

3.2 Car Seat Safety Assessment (Car Seat Testing): A time period during which an infant is positioned in an appropriate car seat and connected to oxygen saturation (SpO2) monitor.

4.0 GUIDELINES

4.1 Infants meeting any one of the following criteria and are patients in a hospital neonatal or pediatric unit undergo a car seat safety assessment prior to discharge:
   4.1.1 Infant is less than 35 weeks and 0 days gestation at discharge.
   4.1.2 Infant weighs less than 2000 grams at time of discharge.
   4.1.3 Infant has been identified as at risk for cardio-respiratory events due to a medical condition or other problems that could impact on positioning and respiratory stability. For infants with such conditions, the infant’s health care provider indicates the need for a car safety assessment in the physician’s order.

4.2 Infants who experienced isolated and self-limiting desaturations or respiratory distress immediately after delivery (such as associated with transient tachypnea of newborn) do not require a car safety assessment.

4.3 Conduct the car seat assessment when the infant is ready for discontinuation of cardio-respiratory monitoring as close to anticipated discharge date as possible.

4.4 If the infant is transferred to a Children’s Hospital ward for further care prior to discharge, the following process assists in arranging a car seat safety assessment prior to discharge:
   4.4.1 The physician in the neonatal unit documents in the transfer order that a car seat
safety assessment is required prior to discharge.

4.4.2 The nurse in the neonatal unit completes the Pediatric Day Unit (PDU) Referral Form for the car seat safety assessment; this is included in the infant’s paper work on transfer to Children’s Hospital.

4.4.3 The transferring nurse communicates the need for a car seat safety assessment prior to discharge to the receiving nurse at Children’s Hospital.

4.4.4 The Charge Nurse or Clinical Resource Nurse on the receiving unit at Children’s Hospital communicates the need for a car seat safety assessment to PDU nursing staff, discusses an expected date of discharge (if known) and faxes the consult to PDU.

4.4.5 The hospital unit receiving the infant makes an appointment for a car seat safety assessment in PDU to ensure that the assessment is completed prior to the infant’s discharge from hospital.

4.5 Registered nurses who have been instructed in the use of oxygen saturation (SpO2) and cardiorespiratory monitors conduct car seat safety assessments. During this assessment, the infant is placed on a cardio respiratory and saturation monitor for 60 minutes to two hours (see 3.11). The bedside nurse and physician interpret the results.

4.6 The car seat used for the safety assessment is the car seat intended for infant use after discharge from hospital. If this is not available, an alternate appropriate car seat is used.

4.7 Perform the car seat safety assessment no less than 1 hour after the last feeding.

4.8 Conduct the car seat assessment for a minimum of 60 minutes or the length of estimated travel time home to a maximum of 2 hours.

4.9 Consider the infant to have passed the car seat safety assessment if he/she has no cardiorespiratory events (as defined in 3.1) during the car seat assessment period.

4.10 In the event of a failure after the car seat safety assessment:
4.10.1 Repeat the car seat safety assessment at an alternate position (30 degrees) or with an alternate car seat. Can be done immediately or the same day.
4.10.2 If the infant fails again, wait 24 hours to repeat and maintain the infant on cardiorespiratory and saturation monitors or have both restarted if previously discontinued.

5.0 REFERENCES


6.0 PRIMARY AUTHORS
6.1 Dr. Aaron Chiu, Neonatologist
6.2 Dr. Michael Narvey, Section Head, Neonatology
6.3 Dr. John Baier, Assistant Medical Director NICU, HSC
6.4 Dr. Ruben Alvaro, Assistant Medical Director, NICU, SBH