

Procedure

CCHMC Trauma Service Operation Manual Procedure	<i>Procedure Number</i>	TR-16
	<i>Effective Date</i>	8/31/2022
Car Seat Tolerance Screening and Car Bed Use	<i>Page</i>	1 of 3

1.0 SCOPE

To ensure the safety of CCHMC patients during transportation in a private vehicle who do not currently have an appropriate child restraint system (car seat/booster seat)

2.0 DEFINITIONS

N/A

3.0 PROCEDURES

3.1. Car Beds Available for Loan

3.1.1. Hope Car Bed

3.1.1.1. Weight range: 4.5-35 lbs

3.1.1.2. Maximum height: Up to 29 inches (or taller if legs are permitted to bend)

3.1.1.3. Allows for supine, prone, or side-lying positioning

3.1.2. Dream Ride Car Bed

3.1.2.1. Weight range: 5-20lbs

3.1.2.2. Height range: 19-26in

3.1.2.3. Allows only for supine positioning

3.2. A patient may be considered for a car bed for any diagnosis in which an angled position may not be tolerated

3.2.1. Examples: Hydrocephalus, Pierre Robin Syndrome, obstructive sleep apnea, or any other condition the medical team may deem concerning

3.2.2. Patients with restrictions on lying supine may also be considered and would bypass the car seat tolerance screen in a traditional seat but would be screened in the car bed

3.2.3. Hospice patients would be exempt from this process and evaluated on a case-by-case basis

3.3. An Epic Car Seat Screen should be placed within 7-14 days prior to discharge Trauma Services will schedule a fitting education session with the caregivers at that point

3.3.1. A link to the Epic job aid can be found by searching for "car seat" on Centerlink

3.3.2. The Car Seat Tolerance Screening will be subsequently completed by a CPST

3.4. If a patient is determined to have a potential need for a car bed, they will first undergo a car seat tolerance screening in their traditional car seat unless they are exempt under 2.2 or 2.3

3.5. Car Seat Tolerance Screening (CSTS) in a Traditional Seat

3.5.1. Provider places order for CSTS

3.5.1.1. This order should contain patient specific vital sign parameters for apnea, bradycardia, and oxygen saturation. It should also include any oxygen requirement and the length of time the patient should be screened

3.5.1.2. The screen should be completed for a minimum of 90 minutes, but not to exceed 120 minutes

3.5.1.3. Screens should not exceed 120 minutes as families should be educated to stop driving at least that frequently for breaks, feeding, changing, etc.

3.5.2. The car seat must be fitted by a Child Passenger Safety Technician (CPST) prior to the screening No adaptation is to be made to the seat once this is completed

3.5.2.1. Trauma Services In-House car seat team is available Mon-Fri 10:00-16:00, excluding holidays, for assistance, if a unit-based CPST is not available

3.5.3. The screening will be set up by a CPST using the seat the patient will discharge in

3.5.3.1. The seat should be positioned baseless or on the base (however it will be used in the vehicle) at the maximum allowed recline

3.5.3.2. The car seat should be placed on the floor, never on a raised or soft surface

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- 3.5.4. A baseline set of vitals should be collected by the bedside RN with the patient lying in bed
- 3.5.5. The patient should be placed on monitors and then buckled in the seat by the family and/or CPST
 - 3.5.5.1. This should be done at least 30 minutes after the patient's last feed
- 3.5.6. The screen will be completed for 90-120 minutes
 - 3.5.6.1. Screening should not exceed 120 minutes. Families will be educated to stop driving at least that frequently during travel
 - 3.5.6.2. A family member or staff member must always be supervising the patient during the screening
- 3.5.7. Pass-Fail Criteria
 - 3.5.7.1. Patients should be as stable in their car seats as they are in their crib
 - 3.5.7.2. Pass-fail criteria will be discussed and agreed upon by the patient's medical team prior to the screening and included in the order
 - 3.5.7.3. Recommended to use bedside monitor parameters with agreed upon deviations, heart rate, respiratory rate, and perfusion criteria must be determined
 - 3.5.7.3.1. A sample set of parameters may be:
 - 3.5.7.3.1.1. Apnea >20 seconds
 - 3.5.7.3.1.2. Bradycardia <80 beats per minutes or <20% from the baseline heartrate for >10 seconds
 - 3.5.7.3.1.3. Oxygen saturations <80% or <20% from the baseline saturations for >20 seconds
 - 3.5.7.4. Data will be recorded at baseline, and then every 30 min during the screen until completed
 - 3.5.7.5. Patients who pass the CSTS in their traditional seat will be discharged in the seat they were tested in
 - 3.5.7.6. Installation education in the vehicle will be completed with the family after the screening is completed
 - 3.5.7.7. Patients who fail the CSTS in their traditional seat will be discussed collaboratively between the medical team and Trauma Services
 - 3.5.7.8. Some may be re-screened in the traditional seat or will proceed to be screened in the car bed using the same pass-fail criteria
 - 3.5.7.9. A re-screen in a traditional seat should take place no less than 12hrs after the initial screening to allow the patient time to rest or at a future time if clinical condition changes
- 3.6. Car Seat Tolerance Screening in a Car Bed
 - 3.6.1. Provider places order for CSTS
 - 3.6.1.1. This order should contain patient specific vital sign parameters for apnea, bradycardia, and oxygen saturation. It should also include any oxygen requirement, positioning needs, and the length of time the patient should be screened
 - 3.6.1.2. The screen should be completed for a minimum of 90 minutes, but not to exceed 120 minutes
 - 3.6.1.3. Screens should not exceed 120 minutes as families should be educated to stop driving at least that frequently for breaks, feeding, changing, etc.
 - 3.6.2. This repeat screen should take place no less than 12hrs after the initial screen to allow the patient to rest or at a future time if clinical condition changes
 - 3.6.3. The patient will be fitted in the car bed by Trauma Services staff and no adaptations to the seat are to be made after this is completed
 - 3.6.4. The screen will take place as outlined in section 5 above using the same Pass-Fail criteria
 - 3.6.5. Patients who pass this CSTS will be discharged in the Car Bed
 - 3.6.6. A practitioner's order for the car bed will need to be placed specifying the positioning of the patient and expected plan for follow up (see section 7)
 - 3.6.6.1. Installation education at the vehicle will be completed with the family after the screening is completed and the order has been placed
 - 3.6.7. Patients who fail this CSTS will be discussed collaboratively between the medical team and Trauma Services to determine the next steps
 - 3.6.7.1. Some of these next steps may be waiting a length of time and re-screening, discussing if a traditional seat may be modified (with manufacturer permission) to better suit the patient, further medical investigation to determine the cause of failure
- 3.7. Car Bed Follow Up

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- 3.7.1. Patients discharged in a car bed will have a follow up plan determined prior to discharge included in the car bed order
- 3.7.2. This plan will include a period for follow up (i.e. 6 weeks, 3 months), a plan for repeating the CSTS in their traditional seat, and, if applicable, a plan for a referral to the Perlman Center for their own car bed to be ordered (if the need is expected to be long term)
 - 3.7.2.1. Patients will return the car bed to CCHMC when they have later passed a screening in their traditional seat or upon receiving their own car bed through the Perlman Center
 - 3.7.2.2. Failure to return the car bed in the same condition as issued will result in the patient being charged for the cost of the item

3.8. Resources

- 3.8.1. AAP Clinical Report- Safe Transport of LBW and Preterm Infants at Discharge (2009, reaffirmed 2019) <https://pediatrics.aappublications.org/content/pediatrics/123/5/1424.full.pdf>
- 3.8.2. AAP Policy Statement- Transporting Children with Special Health Care Needs (2019) <https://pediatrics.aappublications.org/content/pediatrics/143/5/e20190724.full.pdf>
- 3.8.3. AAP Policy Statement- Child Passenger Safety (2018) <https://pediatrics.aappublications.org/content/pediatrics/142/5/e20182460.full.pdf>
- 3.8.4. NHTSA/NSC- Hospital Discharge Recommendations for Safe Transportation of Children (2015) https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/812106_hospitaldischrgerecsafetranschildren.pdf

4.0 APPROVALS

The Injury Prevention section of the Trauma Department and appropriate content experts will periodically review and update this procedure as appropriate. Procedures will be reviewed at least every 3 years. Questions regarding this procedure shall be directed to, and authority over this procedure shall vest with, the Trauma Injury Prevention Coordinator.

REVISION HISTORY		
Original Date		
8/31/2022		
Revision Date		
Review Date		

