RIDING SAFE: Transporting Children with Special Needs

Guide for certified Child Passenger Safety Technicians

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Objectives

• To gain basic knowledge of special medical or health conditions that may require specialized transportation.

• To learn about types of specialized child restraints beneficial for certain medical conditions.

• To find out how to access the Illinois Special Needs CPS Resource Center at Children’s Hospital of Illinois.
Definition of “Special Needs”

Children with special health care needs are those who have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition and who also require healthcare or services of a type or amount beyond that required by children generally.

PEDIATRICS, July 1998
Illinois Child Passenger Safety Law  
*(effective January 1, 2004)*

Illinois CPS law includes an exemption specific to children with special medical needs.

*The provisions of this Act shall not apply to a child passenger with a physical disability of such a nature as to prevent appropriate restraint in a seat, provided that the disability is duly certified by a physician who shall state the nature of the disability, as well as the reason the restraint is inappropriate. No physician shall be liable, and no cause of action may be brought for personal injuries resulting from the exercise of good faith judgment in making certifications under this provision.*

Though this exemption is in place, it is always **BEST PRACTICE** for any child to be properly restrained in an appropriate child restraint.
MEDICAL CONDITIONS

General Summary of Common Medical Conditions
Medical Conditions

Certain medical conditions may create a need for specific positioning in a car seat, additional support for the child, or specialized transportation to meet the child’s health needs.

This may be because of the child’s size, breathing issues, lack of muscle tone, surgical procedures, and more.

The following slides will give you a brief overview of some common medical conditions.
Low Birth Weight & Prematurity

Infants born less than 5.5 pounds (2500 grams) are considered “low birth weight.” *This can include premature or full-term infants.

In an average week, 351 Illinois infants are born low birth weight.

-National Center for Health Statistics

Infants born less than 37 weeks gestation are considered “premature.”

In an average week, 531 Illinois infants are born premature.

-National Center for Health Statistics
Low Birth Weight & Prematurity

Have increased risk for breathing or heart rate difficulties.

May require travel in a **fully reclined position** (*laying flat*) due to difficulty breathing or low heart rate.

Need child restraints that **accommodate their smaller size**.
Low Birth Weight & Prematurity

It is recommended these infants have a car seat trial before hospital discharge.

**NOTE:** Hospitals are NOT REQUIRED to conduct car seat trials.

Infants are tested in a car seat or car bed and are monitored for:
- **Apnea:** temporary interruption in breathing
- **Bradycardia:** slowing of heart rate
- **Oxygen Desaturation:** lowered oxygen levels

Car seat trials can help determine if the infant can ride safely in a conventional car seat or if the infant needs a car bed.
Orthopedic Conditions

Traumatic injuries *(vehicle crashes, falls)* or genetic conditions *(brittle bone disease, hip dysplasia)* can lead to broken bones or dislocations that require orthopedic devices.

Devices *(casts, braces, halos)* immobilize a specific body part to support healing.

In 2009, there were 2,068 cases of orthopedic impairments in Illinois residents ages 3-22.

-Thoughtful House Center for Children
Orthopedic Conditions

Children in casts or braces may have difficulty fitting in their conventional car seats due to:

**Inability to bend at the waist/hips**
*Example: Hip Spica Cast (top right)*

**Legs stabilized too wide apart**
*Example: Long leg casts (bottom right)*

**Insufficient head room**
*Example: Halo Traction (previous slide)*
Neuromuscular Disorders

Neuromuscular disorders can affect the brain, spine, and muscles.

Common disorders include *(but not limited to)*:

- **Cerebral Palsy**: affects movement, posture, muscle control

- **Hydrocephalus**: abnormal fluid in skull causes disproportionate head size

- **Spina Bifida**: birth defect of the spine
Neuromuscular Disorders

Children with neuromuscular disorders often times will have difficulty with head, neck, and/or trunk control.

In these cases, children may need additional support in sitting upright in child restraints.
Developmental Delays & Behavioral Conditions

Children with developmental delays gain skills at a slower rate. This includes motor and behavioral skills.

Children with behavioral conditions can have issues with impulse control, distractions, and short attention spans.

As they get older, some children may not be mature enough to simply use booster seats or seat belts. They may need more supportive child restraints.
Developmental Delays & Behavioral Conditions

Common conditions include *(but not limited to)*:

**Down Syndrome:** occurs in 1 in 800 births

**Autism Spectrum Disorder:** occurs in 1 in 88 births

Often parents and caregivers need assistance in finding the most appropriate child restraint for their children.

**Common issues:**

- Larger or older children outgrowing harness straps
- Children getting out of harness straps – undoing buckles
- Resistance to using child restraints
Conventional Car Seats

Do ALL children with special needs have to use specialized restraints?

**NO**

Use conventional car seats as a **FIRST OPTION** when possible. They are typically **less expensive**, **easier to use**, and **more readily available**.

Make sure that the car seat is appropriate for the child’s **height**, **weight**, and **positioning needs**.
Conventional Car Seats

Conventional car seats with certain features may be beneficial to properly position children with special needs.

- **Lower minimum weight limits** for smaller infants
- **Higher weight limit harnesses** for larger children needing support of full harness system
- **Multiple recline positions** for infants with breathing or head control issues
- **Forward-facing recline** for children with limited muscle control
- **Open head room** for children with halos or hydrocephalus
- **Low/no sides** for children in casts or braces
Specialized Child Restraints

Basic Overview of Car Beds, Orthopedic Condition Restraints, & Large Medical Restraints
Car Beds

Car beds allow infants to travel in a fully reclined position.

Three (3) types of car beds are available on the current market.

- Angel Ride Car Bed
- Dream Ride Car Bed
- Hope Car Bed
Car Beds – Angel Ride

For Infants up to 9 pounds & 21.5 inches

No minimum weight

OPTION for:
- Infants weighing less than 5 pounds at discharge
- Infants unable to tolerate “semi-reclined” position
- Infants who must travel on stomach or right side

Three (3) Positions:
- Supine (back)
- Prone (stomach) *only if medically necessary
- Right Side *only if medically necessary
安装:

- 只适用于后座乘客或中心位置

- 绝对不适用于驾驶侧

- 头部必须始终朝向车辆中心

- 安全带绕过床的外部（仅限安全带部分）

- 织物带绕过安全带以防止床背倾斜
Car Beds – Dream Ride

For Infants 5 – 20 pounds & 19-26 inches

OPTION for:

Larger infants unable to tolerate “semi-reclined” position

Larger infants who must travel on stomach

Car bed to be installed on Driver’s side in vehicle

Two (2) Positions:

Supine (back)

Prone (stomach) *only if medically necessary
Car Beds – Dream Ride

Installation:

- Rear seating positions

Head must **ALWAYS** face center of vehicle

- Seat belt routes through **2 fabric loops** facing the back of vehicle seat

- Fabric loops **can be transferred to either side** of car bed to ensure head faces center of vehicle.

Can be a challenging installation to get a tight fit.
Car Beds – Hope Car Bed

For Infants 4.5 – 35 pounds & up to 29 inches

OPTION for:
- Infants unable to tolerate “semi-reclined” position
- Infants who must travel on stomach or right side
- Infants with serious medical conditions who cannot use harness straps

Three (3) Positions:
- Supine (back)
- Prone (stomach) *only if medically necessary
- Right side *only if medically necessary

Restraint Options:
- 3 point harness with cummerbund
- Sleeping bag with cummerbund
Car Beds – Hope Car Bed

Installation:

- Rear passenger position in vehicle ONLY

- Head must ALWAYS face center of vehicle

- Must use two (2) seat belts to install

- Has rebound straps and/or leveling wedge to help keep car bed level on vehicle seat & for most secure installation
Car Beds - Misuse

CANNOT position infant on side in Dream Ride car bed

CANNOT install Angel Ride on driver’s side

CANNOT install Angel Ride backwards
Orthopedic Condition Restraints

Orthopedic Condition Restraints provide support and proper positioning for children with casts or braces.

Modified EZ-On Vest

Hippo Car Seat
Orthopedic Condition Restraints
HIPPO Car Seat

For children **5 – 65 pounds & up to 49 inches**
*NOTE: Weight MUST include both child & cast (casted weight)*

**OPTION for:**
- Infants with casts or braces
  *(rear-facing 5-33 pounds)*
- Younger children with casts or braces
  *(forward-facing 20-65 pounds)*
- Younger children who require forward-facing recline *(20-40 pounds)*

**Features:**
- No sides near legs to allow for wide casts
- Wedge to fill space between cast & back of Hippo car seat

No Sides
Orthopedic Condition Restraints
HIPPO Car Seat

Installation:

Any rear seating position

Seat belt or LATCH

Top tether recommended (mandatory after 40 pounds or when used semi-reclined forward-facing)

Rear-facing: Semi-reclined

Forward-facing: Upright or semi-reclined (up to 40 pounds)

Support casted legs with pillows or blankets
Orthopedic Condition Restraints
Modified EZ-On Vest

For children **1-12 years old** & **20-100 pounds**

*NOTE:* Weight MUST include both child & cast (casted weight)

OPTION for:

- Children unable to bend at hips/waist
- Children who must travel fully reclined

Features:

- Two (2) sizes:
  - 1-5 years old & 20-65 pounds
  - 5-12 years old & 20-100 pounds
- Extremity belt to support legs

Extremity Belt
Orthopedic Condition Restraints
Modified EZ-On Vest

Installation:

Keep child’s head as far from door as possible

Requires full vehicle bench seat

**Two (2) seat belts** to route through vest & extremity belt (unless child is under 30 inches – then use 1 seat belt)

Fill vehicle floor board with padding

Support under cast with pillows or blankets

Seat belts routed through vest

Padding under cast
Orthopedic Condition Restraints Misuse

CANNOT use 3 seat belts to install

NO padding under legs
Large Medical Restraints

Large Medical Restraints provide additional support for older or larger children with special needs.

Have higher weight limits and offer accessories to support limited muscle tone.
Large Medical Restraints

Several models and brands are available

Must order through Medical Equipment Provider – not available through retail stores (may take up to few months to receive seat order)

Expensive – can be covered by insurance if medically necessary for child

Forward-facing only restraints

Top tether is mandatory
Large Medical Restraints Misuse

NO

CANNOT install Rear-facing

Must be forward-facing ONLY
Illinois Special Needs
Child Passenger Safety Resource Center
Access to Statewide CPS Services for Illinois families & organizations
Special Needs CPS Resource Center

Statewide Resource Center managed through and located at Children’s Hospital of Illinois, Peoria

Satellite site located at LaRabida Children’s Hospital, Chicago (serves northeastern Illinois counties)

Funded through Illinois Department of Transportation since 2002

Access through toll-free Safety Information Line

1-877-277-6543

Monday – Friday 8:00am – 4:00pm (closed major holidays)
Special Needs CPS Resource Center - SERVICES

Short-term loan program:

Car beds & Orthopedic Condition Restraints available

Loan **up to 2 months** for nominal loan fee

Any Illinois resident, hospital, or organization can use the loan program

Requires installation & education **assistance by certified Child Passenger Safety Technicians**

1-877-277-6543
Certified CPS Technicians trained in special needs child passenger safety can consult with families or healthcare providers on long-term options for specialized restraints (Resource Center cannot provide seats on long-term basis)

Can assist with education, positioning, and installation of specialized restraints

Maintains a list of Illinois Special Needs CPS trained technicians

1-877-277-6543
Trainings & Continuing Education:

Certified CPS Technicians trained in special needs child passenger safety are available to present to hospitals, groups, & organizations on specialized transportation options.

Offers 2-day “Safe Travel for All Children” Special Needs CPS enrichment courses for certified CPS technicians throughout Illinois.

Hosts quarterly Continuing Education meetings for Illinois CPS technicians trained in special needs CPS.

1-877-277-6543
Special Needs CPS Resource Center

For questions about special needs child passenger safety in Illinois, call

1-877-277-6543
This presentation was developed by Children’s Hospital of Illinois. Information was based on the “Safe Travel for All Children” curriculum through the National Center for the Safe Transportation of Children with Special Health Care Needs and manufacturer’s instructions.

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