

## Instructional Posters and Prevention Education: Do they really Work?

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# Instructional Posters and Prevention Education: Do They Really Work?

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## Background:

This study aimed to investigate child passenger safety (CPS) knowledge levels in parents of infants born at Lehigh Valley Health Network for effectiveness of CPS educational posters, which were developed to instruct parents on proper child safety seat (CSS) infant positioning and CSS restraint system usage. Posters were displayed in the Emergency Department, Pediatric Unit, Pediatric Intensive Care Unit, Neonatal Intensive Care Unit, and each Mother-Baby Unit (MBU) room. We hypothesized that the posters displayed in the MBU, along with patients socioeconomic status, play a role in CPS knowledge.

## Study Design:

Randomized survey sample.

## Setting:

Mother-Baby Unit, Lehigh Valley Health Network, Allentown PA, January 2013 through May 2013.

## Sample:

201 parents were randomly selected by either the Trauma Prevention Coordinator or the Parent Education Coordinator while rounding on the MBU.


## Methods:

A questionnaire was randomly administered to parents of newborns. The questionnaire was designed to test the parents' knowledge of CPS with the goal of identifying whether knowledge was gained during their hospital stay and, if so, whether the knowledge was acquired from the CPS poster. Data collected was specific to the understanding of proper infant placement into the restraint system, usage of the instructions provided on the poster, level and source of knowledge prior to birth admission, and perceived knowledge gain since admission. The questionnaire also captured demographic information—gender, age, race, number of children already in the home, level of education, and insurance status—to determine whether any of these factors affect CPS knowledge.

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### Properly Securing Child in Rear-Facing Seat

1. Place baby's back and bottom flat in seat.
2. Harness slots should be at or below baby's shoulders.
3. Harness straps must be snug. You should not be able to pinch any slack in harness at baby's shoulders.
4. Place harness retainer clip at armpit level.
5. Avoid bulky clothing under the snug harnesses. Place a blanket over the child after child is secured in the car seat.
6. Place rolled blanket between child and crotch strap (if necessary).
7. Place rolled blankets at sides of head for positioning (if necessary).
8. Baby's head must be 1 inch below top of car seat shell.
9. Always follow manufacturer's instructions for placement of carrier handle.
10. No nonregulated products attached to the seat, i.e. toys, wrap and rides, etc.



Always follow vehicle and car seat instructions for correct use.  
**NEVER** leave your child unattended in car seats, inside or outside of the vehicle.

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Child Passenger Safety Knowledge Evaluation

The purpose of this voluntary child passenger safety knowledge assessment is to gain valuable insight into our existing child passenger safety education program here at Lehigh Valley Health Network. Completion of this questionnaire implies consent to use the collected data for quality improvement purposes.

Directions: Please fill in all boxes like this:  or write your answers in the space provided.

1. Where did you get your information on how to place your newborn into the car seat?  
 Family  Friends  
 Internet  Parent Ed. Classes  
 Health care provider  
 Car seat check  
 Car seat instructions  
 Other \_\_\_\_\_

2. Has your knowledge of child passenger safety increased during this hospital stay?  
 Yes  No

3. What improved your knowledge since admission here?  
 Nursing staff  Pediatrician  
 OB/GYN  
 Other health care provider  
 Hospital handouts  
 Other \_\_\_\_\_  
 No new knowledge gained

4. How should the child be dressed before placement in the car seat?  
 Non-bulky everyday clothing  
 Dress according to weather conditions  
 Heavy clothing to keep the baby warm

5. Where should bulky clothing be placed?  
 Under the harness straps  
 On top of the harness straps  
 Can be placed in either position

6. How should the harness straps be placed in the car seat on the child?  
 At or below the shoulders  
 At the shoulders  
 Above the shoulders

7. How should the harness straps be:  
 Loose with slack  
 Snug without slack  
 Tight pushing on the shoulders

8. Where should the retainer clip or chest clip be placed?  
 Anywhere  
 Over the abdomen  
 At armpit level

Demographic Information:  
Age \_\_\_\_\_ Sex: M F  
Race:  White only  Black only  
 Hispanic  >1 race  
 Other \_\_\_\_\_  
# Children in house besides new baby \_\_\_\_\_

Insurance Status:  
 Private/Commercial  Medicare  
 Medicaid  Self

Level of Education:  
 Less than High School  Some college  
 High School  College degree

Back side questions: Verbally asked:  
PKYN: Did you read the (child safety seat) poster in the room? Yes or No?  
PKYN: Did you gain any knowledge from reading the poster that helped you answer any of the survey questions? Yes or No?

## Results:

In the 201 completed surveys, females completed 71.2% of the surveys, males 28.8%. However, 64.6% of the males had correct answers as opposed to 55.6% of females ( $p = .054$ ). Parents >40 years of age had more correct answers (70%) as compared to those <30 years of age (53%,  $p = .246$ ) or ages 30-39 (63%,  $p = 1.0$ ). Using a one-way ANOVA with Bonferroni Correction, correct answers based on race showed "white" as 63%, with white vs. Hispanic (40.5%,  $p < .001$ ). All other race comparisons were not significant. Absolute trending was displayed in education level, where "college degree" had most accurate answers (63%) (high school (51%) vs. college  $p = .009$ ). Correct answers of those with private insurance was 68.1% as compared to parents with Medicare (35.4%,  $p < .001$ ) or Medicaid (42.9%,  $p < .001$ ). Of the study participants, 42.1% of parents acknowledge having read the poster in the MBU. Of those who read the poster, 77.5% reported that they had an increased knowledge of CSS and CPS after reading it.

## Conclusion:

When utilized in the Mother-Baby Unit, the CPS posters appear to increase parental knowledge of child passenger safety as well as child safety seat information. Of the parents surveyed, 57.9% reported that they never read the CPS poster. In addition, while more females completed the study than males, females had a lower accuracy rate. These two factors may suggest a need for more appropriate poster placement in the patient room. Results also show that socioeconomic status is a factor in baseline CPS knowledge; education for this population needs to be heightened.

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