

# Front Seat Placement of Children Aged 12 or Younger within Vehicles: A Rural/Urban Comparison

Andrea Huseth-Zosel, M.S.

Upper Great Plains Transportation Institute, North Dakota State University

Dept. 2880; P.O. Box 6050; Fargo, ND 58102

## Introduction

- Motor vehicle crashes are the leading cause of death for children between the ages of 1 and 12 in the United States (CDC, 2010).
- When restraint use is examined by age category, a trend of decreasing restraint is seen with increasing age.
- There is also a decline in child rear placement as children age.
- Why is seat placement important? Children are 21% to 40% less likely to die in a fatal crash when rear-seated than when front-seated.

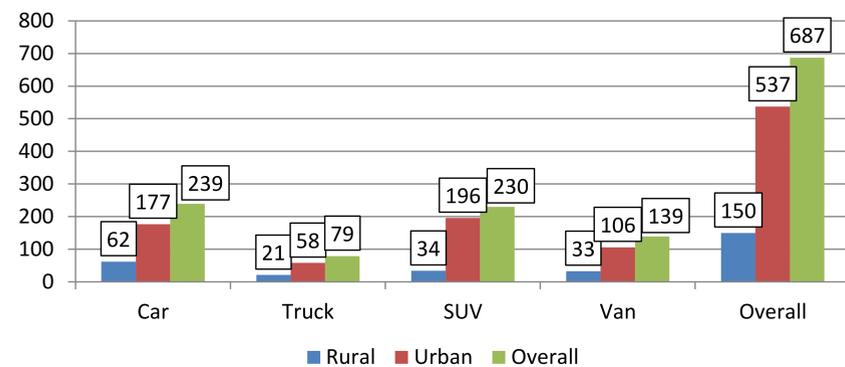
## Objectives

- This study seeks to contribute to the safety literature to determine at what rate children are riding front-seated within vehicles and if differences exist between rural and urban areas in regards to child front seat placement.
- In addition, this study seeks to determine the rationale for front seat placement of children and to assess parental/caregiver perceptions of traffic safety issues.

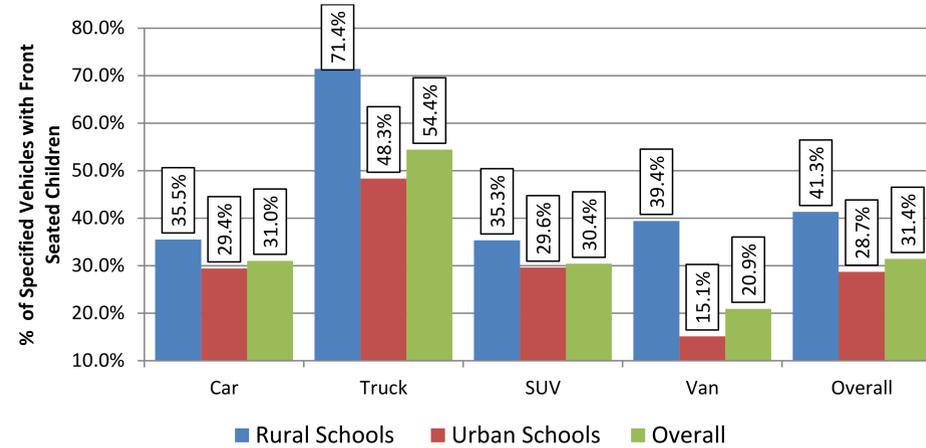
## Methodology

- Current child placement rates within vehicles were ascertained through direct observation of morning child drop-offs at area elementary schools. Elementary schools were chosen as observation locales as they encompass the selected age group – children aged 12 or younger.
- During the seat placement observations, random vehicles were chosen to receive recruiting packets containing information regarding an opportunity for parents/caregivers to take part in an upcoming focus group on child traffic

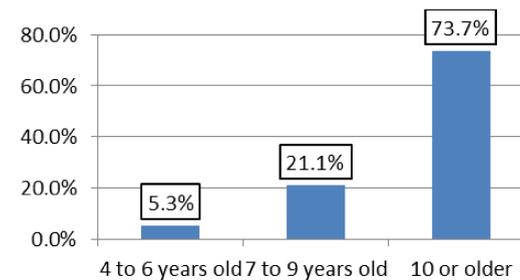
### Vehicle Observation Distribution



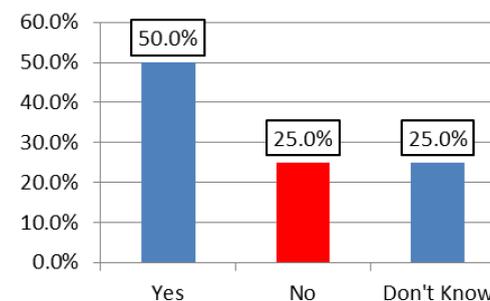
### Front Seat Placement by Vehicle Type and School Rurality



### Minimum Age for Child Front Seat Placement (Focus Group Parent Responses)



### Existence of North Dakota Law for Child Front Seat Placement (Focus Group Parent Responses)



## Results

- During November to December 2009, 687 vehicles were observed at four rural and four urban schools.
- 41.3% of rural children and 28.7% of urban children were front-seated.
- Overall, nearly one-third of children were front-seated.
- By vehicle type, children riding in trucks were most likely to be front-seated (54.5%) followed by cars (31%), SUVs (30.4%) and vans (20.9%).
- By vehicle type and geography, the biggest difference was between rural and urban vans—with 39.4% of children riding in vans in rural areas being front-seated and 15.1% of children riding in vans in urban areas being front-seated.
- Of the vehicles observed at rural schools with front-seated children, 93.5% had room available in the rear of the vehicle for the child, while slightly fewer (90.8%) similar vehicles observed in urban areas had room available in the rear of the vehicle.
- Overall, parents were aware that seating a child in the rear of a vehicle is safer.
- Several reasons were given for not having child seated in the rear of a vehicle, including size of vehicle, number of children to be transported, differences in family guidelines, and ambiguous 'rules' regarding child vehicle safety.
- Parents felt that child vehicle safety information should come from as many sources as possible. They were also concerned that the majority of information received regarding traffic safety focused more on much younger children, and that as their children aged, they tended to receive less and less information.

## Conclusions

- Nearly one-third of vehicles observed had children seated in the front seat.
- Significant urban/rural differences exist in child seat placement, with children in rural areas much more likely to be front-seated than children in urban areas.
- Differences also exist among vehicle type, with children riding in pick-up trucks more likely to be front-seated than children in any other type of vehicle.
- Overall, parents were aware that seating a child in the rear of a vehicle is safer.

## Acknowledgements

The author wishes to thank Safe Kids of Fargo/Moorhead, Bobbi Paper, MeritCare Health System and the North Dakota Department of Health – Injury Prevention Program. Thanks also goes out to the participating schools and the participating parents- this research would not have been possible without them. The author also acknowledges the astute statistical assistance of Kimberly Vachal and Donald Malchosa. This research report has been prepared with funds from the Mountain Plains Consortium and Safe Kids of Fargo/Moorhead.

The contents of this report reflect the views of the authors, who are responsible for the facts and the accuracy of the information presented. This document is disseminated under the sponsorship of the Department of Transportation, University Transportation Centers Program, in the interest of information exchange.

The U.S. Government assumes no liability for the contents or use thereof.

North Dakota State University does not discriminate on the basis of race, color, national origin, religion, sex, disability, age, Vietnam Era Veteran's status, sexual orientation, marital status, or public assistance status. Direct inquiries to the Vice President of Equity, Diversity, and Global Outreach, 205 Old Main, (701) 231-7708.