



## Case study for the promotion of Child Safety in Motor Vehicles

### “KIDS IN THE BACK - NIÑOS ATRÁS”

**Reference:** Greenberg-Seth J, Hemenway D, Gallagher SS, Ross JB, Lissy KS. Evaluation of a Community-Based Intervention to Promote Rear Seating for Children (*Am J Public Health*.2004; 94: 1009-1013)

Available at: <http://www.pubmedcentral.nih.gov>

**Background:** Motor vehicle crashes are the leading cause of deaths among children younger than 12 years in the United States. Although research has proved the effectiveness of rear seating in terms of fatality risk reduction and the National Highway Traffic Safety Administration (NHTSA) has given advice about the convenience of this practice, there are still a lot of parents that put their children in the front seat. In 1997, the USA National Transportation Safety Board recommended that each state amend its child passenger safety laws to make child rear seating compulsory, but in 2004 there were only 7 states that actually had passed legislation mandating child rear seating.

**Setting:** “Kids in the Back / Niños Atrás” was implemented in Holyoke, Massachusetts, a low-income community with a high proportion of Hispanic residents. The campaign took place from August 2000 to March 2002.

**Aim:** The aim of the campaign was to increase the proportion of children aged younger than 12 years seated in the rear of motor vehicles in a predominantly low-income, Hispanic community, while reinforcing the message that all children should be properly restrained by a lap-/shoulder- belt system or child restraint device (e.g. infant seat, child safety seat, booster seat).

**General design:** The intervention was led by a community coordinator. This coordinator was chosen from the own Holyoke community and was specifically trained to become a child passenger safety technician. Then a community task force was established to identify community needs and development of materials. Findings from focus groups, interviews and baseline data were also used in the program. Different strategies to promote rear seating of children were implemented in the community: from an incentive program rewarding families when all the children were travelling in the rear seats to community education and awareness strategies. This meant the development of both Spanish and English educational materials.

**Target population:** Residents in Holyoke, Massachusetts. This community is a low-income community with a high percentage of Hispanic/Latino people (41%) and with a 20% of population younger than 12 years.

**Implementation:** The incentive program was implemented at locations chosen on the basis of high traffic volume and safe stopping points (e.g., schools, child care facilities, summer camps). When a family was found to travel with all the kids seated in the rear seat, every member of the family received a small reward. Additional educational messages about restraining properly the kids were given when needed. As for those other families that were travelling with children seated in the front seat, they received verbal and written information on the importance of child rear seating.

In addition to this, a number of educational bilingual materials were developed: 12,000 educational brochures and 2,000 activity books for children were distributed. The project held an information table at 25 community events. 300 posters were displayed throughout the community and a local media agency developed a public service announcement for the program in 3 different radio stations.

**Evaluation:** Basically there were two different mechanisms to evaluate the intervention: roadside observations and driver interviews.

Roadside observations were performed in 3 different cities of the state of Massachusetts: Holyoke (intervention city) and Lawrence and Brockton (used as control cities). There were two observations periods: spring and summer of 2000 and then, in the same sessions in 2002 (right after the end of the intervention in Holyoke). Observations were held at six intersections in each city susceptible of being travelled through by an important number of children. As for the interviews (n=500), there were both pre- and post-intervention interviews happening at fast food restaurants and grocery stores in Holyoke. These interviews started immediately following the observations in each of the two periods. The goal of the interviews was to observe child seating patterns and to assess exposure (drivers were asked if they had heard about the campaign) and knowledge of rear seating safety benefits.

### **Results:**

#### *Roadside observations*

In Holyoke, the percentage of motor vehicles with all children rear-seated increased from 33% to 49% during the period of 2000 to 2002. This increase was statistically significant ( $p < 0.0001$ ). A significant increase was also found in the control cities, however the increase in rear seating in Holyoke was significantly higher than in the control cities ( $p < 0.0001$ ).

In the case of Holyoke, there were differences in the success of the implementation depending on the part of the city. Lower-income areas increase in rear seating patterns (from 35% to 46%,  $p < 0.01$ ) was smaller than in higher-income areas (from 31% to 51%,  $p < 0.01$ ). In the control cities there was no difference between areas depending on income level.

#### *Driver interviews*

Two hundred fifty two motor vehicles pre-intervention and two hundred forty nine motor vehicles post-intervention were observed and the drivers accepted to participate in the program. Approximately half of the participants identified themselves as Hispanic. Both pre- and post-intervention, about half of the motor vehicles observed in these interviews had all children seated in the rear. Pre-intervention, there was not statistical significant difference in child seating between

interview participants and non-participants. However, post-intervention, more interview participants had all children rear-seated compared to non-participants (55% vs. 40%,  $p=0.02$ ). During pre- and post-intervention, more than the 90% of the drivers knew that the rear seat was safer than the front seat for kids. Post-intervention, 46% of the drivers reported some kind of exposure to the program. From the latter group, 68% of the drivers were observed with all children rear-seated, compared with 48% of those who were not exposed to the program ( $p=0.01$ ). Multiple program exposures yielded a stronger association with rear seating.

From participants who reported to have heard about the program, the most frequent source of information was the school (32%), followed by the radio (21%), information at a doctor's or dentist's office (17%), from a friend or family member (17%) or through the television or print news (17%). The incentive program reached a smaller number of people (11%) than other aspects of the program. For both Hispanic and non-Hispanic participants, those exposed to the program were more likely to have all children rear-seated (62% vs. 51% for Hispanics, and 78% vs. 38% for non-Hispanics).

This study was the first analyzing a community based intervention with a primary focus on child rear seating. The results show that the campaign affected positively child passenger safety behavior, at least in the short term.

**Comments on further implementations:** The evaluation of the project indicates that community based efforts can have a significant effect in improving child passenger safety behavior independent of legislation. A community based intervention combined with supportive legislation could yield even stronger results.

#### *Child Passenger Safety Weeks*

Community based programs to promote children safety in motor vehicles are a common practice now in the US. This is the case of the program "Child Passenger Safety Weeks", a specific campaign to promote not only child rear seating practices, but also the use of appropriate restraints for kids travelling in motor vehicles.

Communities kick off Child Passenger Safety Week by hosting the first "Seat Check Saturday" inspection events nationwide. The National Highway Traffic Safety Administration provides at its website with a number of different materials to promote during this weeks the correct use of child restraint systems and/or booster seats at a community level. Marketing material, earned media tools and marketing ideas to be distributed to fit local needs and objectives can be found at NHTSA's website (see <http://www.nhtsa.gov/childps/planner/index.cfm>).

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