

WHAT'S HAPPENING WITH SEAT BELTS ON SCHOOL BUSES?

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About this session:

Lap/Shoulder Belts

- Given: Lap/shoulder belts are more effective than lap belts
 - *Note: In some crashes, any belt (including a lap belt) combined with compartmentalization - can be more effective in protecting student passengers than compartmentalization alone.*
- Focus on why we have done what we are doing
- No plans to argue whether having 3-point belts on buses is a good thing. It's a proven technology that parents understand.

History of Belts on Buses in NC

- The Great Seat Belt Debate for School Age Students
- NC Has Ordered Integrated Child Seats on Most Buses Since 1999
- 2003: 3-Point Restraint Seat Belts in North Carolina
13 Buses
- 2007: Flexible Seating Pilot – 1 Bus
- 2016: Rollout of 82 Buses with Lap Shoulder Belts
- 2017: Rollout of an Additional 114 Buses with Lap Shoulder Belts



3-POINT RESTRAINT SEAT BELTS IN NORTH CAROLINA 13 BUSES - 2003

Delivery of 13 buses to 11 districts; placed
into service in January, 2003

Thomas Built Buses / C.E. White Seats
Additional cost - \$100,000 for 13 buses
(state funded)



Bus Configuration

Capacity: 59

Seating Options:

- 3-2 seating (5 positions per row)
- 2-2 seating (4 positions per row)

Decided on 3-2 to preserve capacity

Capacity Change

- 59 vs. 71 elementary
- 59 vs. 48 high school
- 59 vs. 59 middle school

(Required an additional body section)



Implementation

No “mandate” – local discretion

- Each district implemented these buses in the best way that they saw fit
- No requirement to use the belts; however, some districts took the initiative to promote seat belt usage
- Some drivers took their own initiative to enforce use
- Training for driver and passenger were provided when introduced

**Lesson Learned:
Don't do it this way!**

NC CAROLINA PUBLIC SCHOOLS
WAKE COUNTY

1142



Utilization and Enforcement Observations (2003)

- Even with initial training, passengers do not know or do not bother to properly adjust shoulder strap.
- Driver with few discipline problems in a bus without belts have more success enforcing belt usage in a bus with belts.
- Driver with few discipline problems in a bus without belts experience fewer benefits in a bus with belts.
- 3-2 Seating spacing is not adequate for middle school / high school with full loads

Renewed Interest

- Industry responded with Flex Seating
- Rollover Sept. 12, 2007
- Increased parent interest in lap-shoulder belts for improved safety
- Led to involvement in FlexSeat program



Lap-Shoulder Belt Considerations

Positive:

- Safety improvement
- Responds to parent demands

Negative:

- Capacity loss (Addressed with flexible seating)
- Added costs to operations?

Capacity Issue Resolved



□ 2 Child (or Adult)
Configuration



□ 3 Child
Configuration

Program Preparation

- Develop Policy – Principals and School Board
- Educating Children – expectations for use, evacuation procedures
- Educating Driver – product usage, policy enforcement, evacuation
- Informing Parents – Letters and Meetings



Pilot Overview

- Pilot began Nov. 13, 2007
- One bus with 23 FlexSeats
- Two routes – high school, elementary
- No changes in operations or routes
- Six months product use



Feedback from Driver

- Was best year ever for driver in his 15 years of driving for CCS
- Seat belt usage consistent
- Policies helpful in reinforcing usage
- Reduction in behavior problems dramatic
- Other drivers ask about lap-shoulder belts and want their buses equipped
- Increased driver satisfaction
- Driver was diligent about seat maintenance



Feedback from Elementary

- Several children note feeling safer
- Small children note feeling of being restrained/controlled
- Older children needed more reminding about required usage



Conclusions

Impact on Operations

- Overall no operational impact, no additional hardships
- Implementation required initial training
- Morning route initially took a little longer
- Decreased vandalism, resulting in reduced seat maintenance
- Cost of seats is a factor
- Impact of behavior improvement, results in increased driver satisfaction
- Relationships with parents

What We Learned

- Behavior improvement significant
- Parent satisfaction strong
- Policy is of great value
- Team effort required between schools, administration and parents
- Ongoing training is helpful
- Continuous communication is necessary

Recommendations for NC

- School districts should consider lap-shoulder belts:
 - *Improved behavior*
 - *Parent satisfaction*
 - *Driver satisfaction*
 - *Reduced maintenance*
 - *Student safety*
- Flexible seating technology makes lap-shoulder belts practical

....then the economy tanked..

Then the economy
rebounded

School Bus Driver Shortage in NC

- Good Economy provides other opportunities for potential drivers.
- Drivers are leaving because of discipline issues on school buses
- Keeping students in their seats reduces discipline problems
- Districts given an opportunity to request lap/shoulder belts on new, replacement school buses provided by the state

National Association for Pupil Transportation – November, 2015

- NHTSA Administrator, Dr. Mark R. Rosekind:
“School Buses Should Have Seat Belts. Period”



ROLLOUT OF 82 BUSES WITH LAP SHOULDER BELTS 2016

Technical assistance provided by
Operations Research in Education Laboratory
Institute for Transportation Research and education
Centennial Campus @ North Carolina State University
June 21, 2016



NC Implementation Approach – August 2016



Lap/Shoulder Belts on Buses

11 LEAs for 2016-2017; 13 LEAs for 17-18

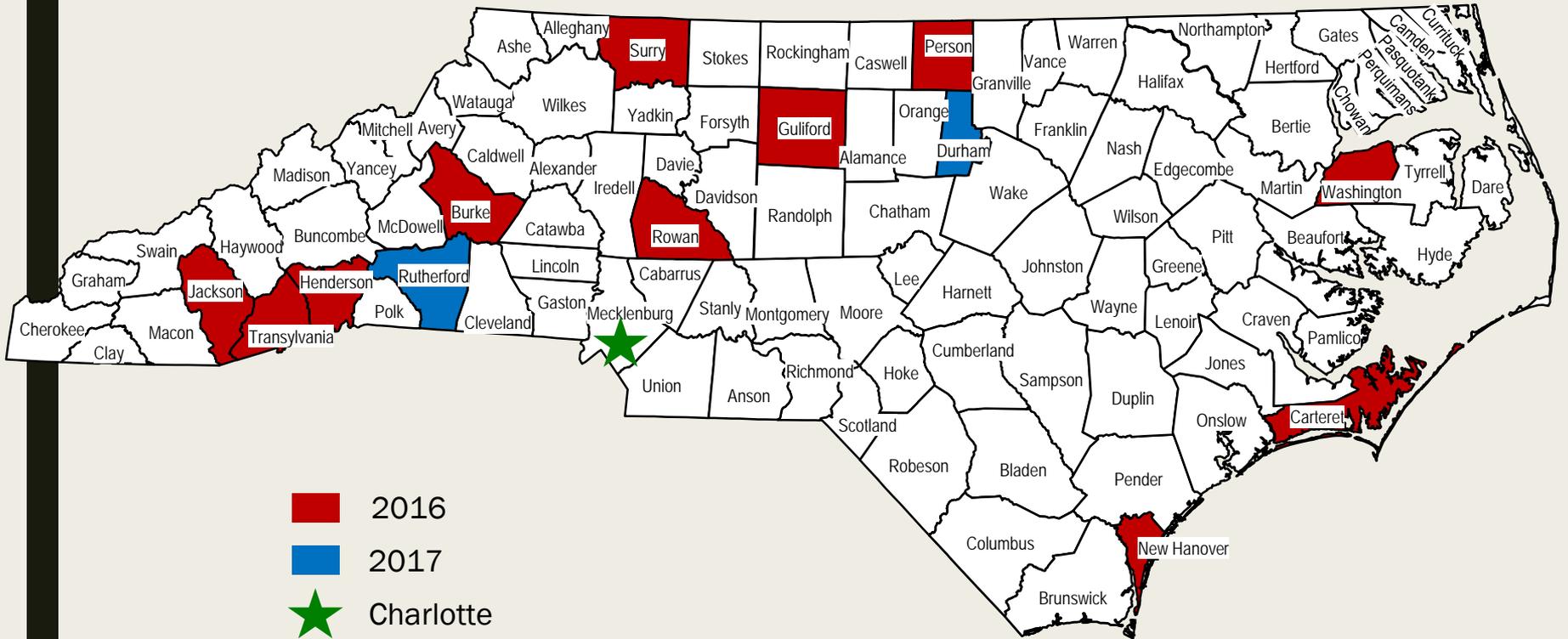
82 buses for 2016-2017; 114 more for 17-18

Selected as option by the local education agency (LEA)

- Burke
 - Rutherford (2017)
 - Durham (2017)
- Jackson
- Henderson
- Transylvania
- Carteret
- Person
- New Hanover
- Guilford
- Rowan
- Surry
- Washington



Participating Districts



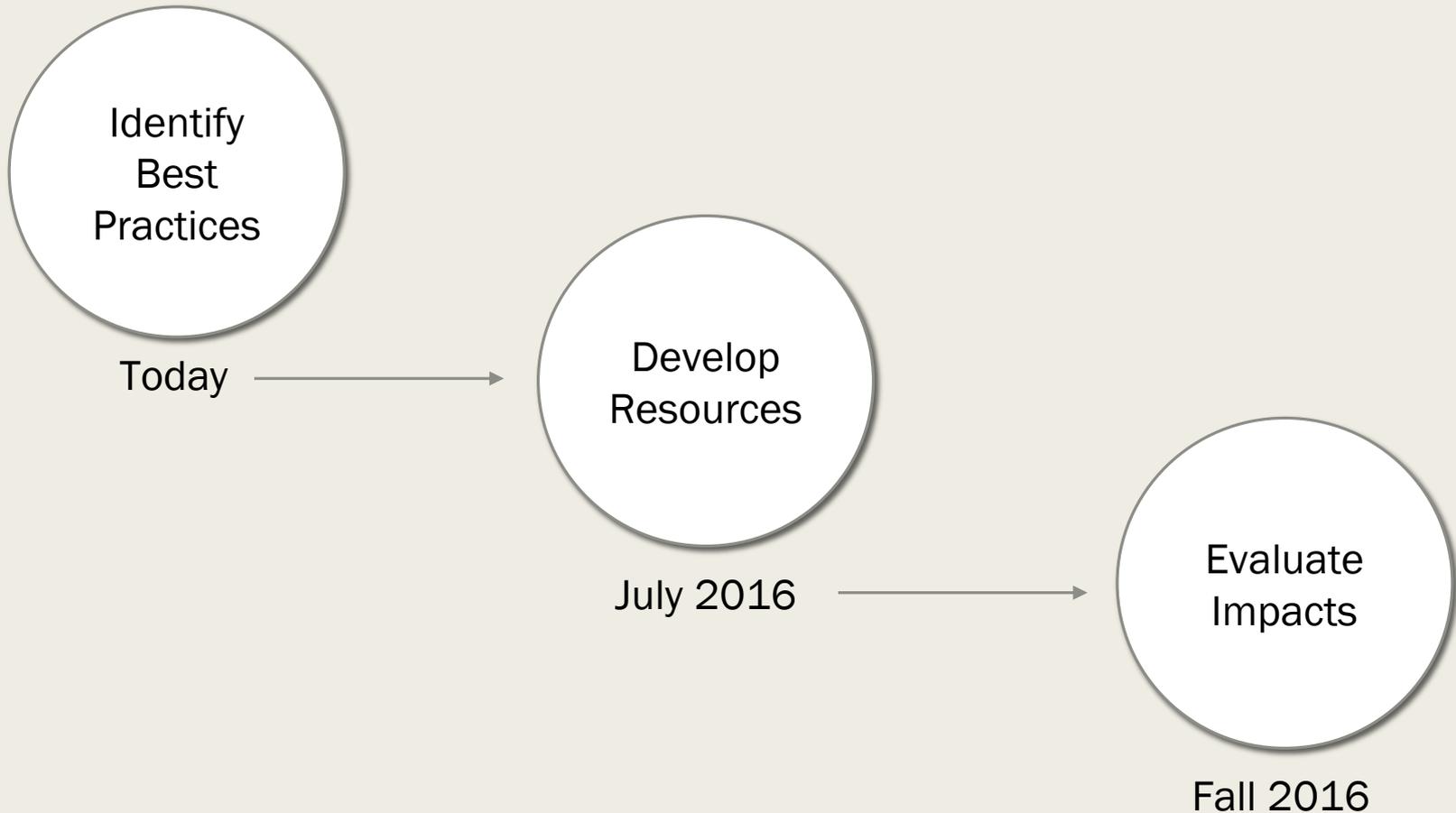
Seat Belt Implementation Project

In response to inquiry from NC DPI, developed a research partnership between North Carolina State University (ITRE) and University of North Carolina at Chapel Hill (HSRC). These partners bring local and national expertise in **bus operations** and **passenger safety** research and practice.

Objectives of Seat Belt Implementation Project:

- 1) Identify national seat belt implementation best practices
- 2) Develop technical assistance resources for LEA implementation
- 3) Study seatbelt implementation impacts for students and drivers

Seat Belt Implementation Project



Bus Acquisition

- **Q1: Who acquires buses with belts?**
- In North Carolina, replacement school buses are acquired and supplied by the Department of Public Instruction. 11 Districts requested 82 buses be equipped with a lap/shoulder belts as an option for 2016-2017. 114 more for 2017-2018.

Seatbelt Use Policy

- **Q2: Who requires that belts be used?**
- In North Carolina, participating districts will require seat belt use by students riding buses equipped with lap-shoulder seat belt technology.

Seat Belt Bus Allocation

- **Q3: How are lap-shoulder belt buses integrated?**
- Is there a gradual integration, or an “all at once” shift? If it is gradual, as it will be in NC, are buses with belts going to serve the youngest pupils? Will they stay with a particular school or be rotated throughout the LEA fleet? Variety of strategies among the 13 districts.

Bus Driver Responsibility and Training

- Q4: What are drivers responsible for?
- In districts from NY to CA, it has been emphasized that school bus drivers should be no more legally responsible than they currently are. Further, driver training should focus on contact between driver, student, and district staff (i.e. transportation officials and/or principal).
- It is expected that bus drivers will take three distinct steps with students as a function of required seat belt use:
 - *Morning - Inform students to wear seat belts as they board bus*
 - *Afternoon - Check Once from front to back prior to departure*
 - *On Route - Verbal Warning and/or citation to students who repeatedly do not or will not wear lap-shoulder belt*

Seat Belt Behavior Enforcement

- **Q5: Who enforces the policy and rules?**
- Across each district, the most important factor in the seat belt implementation model is follow through and accountability for students wearing the lap-shoulder belts.
- Based on interviews, this is most commonly achieved by working closely with **school principals** to hold students accountable for bus behavior. Several districts articulated the preventative benefits of seat belt use and bus behavior (less bullying, fighting, etc.)

Outreach & School Community Partners

- **Q6: Which school community groups should we try to outreach and partner with?**
- Uniformly, school districts that implemented seat belts indicated that a major component of any program is public education and outreach of their seat belt program.
- In addition, partnership between the LEA / district transportation department and school community groups was necessary to gain both buy-in and support for policy and rule enforcement.
- Groups include school board members, principals, PTA, student council and the local media.

Implementation Toolkit

1. Enact Seat Belt Policy

LEA School Board and Administration

2. Educate and Enforce Seat Belt Policy

Transportation Director and School Level Administrators

3. Educate and Apply Seat Belt Policy

Transportation Department – Bus Drivers

4. Discuss and Model Seat Belt Policy

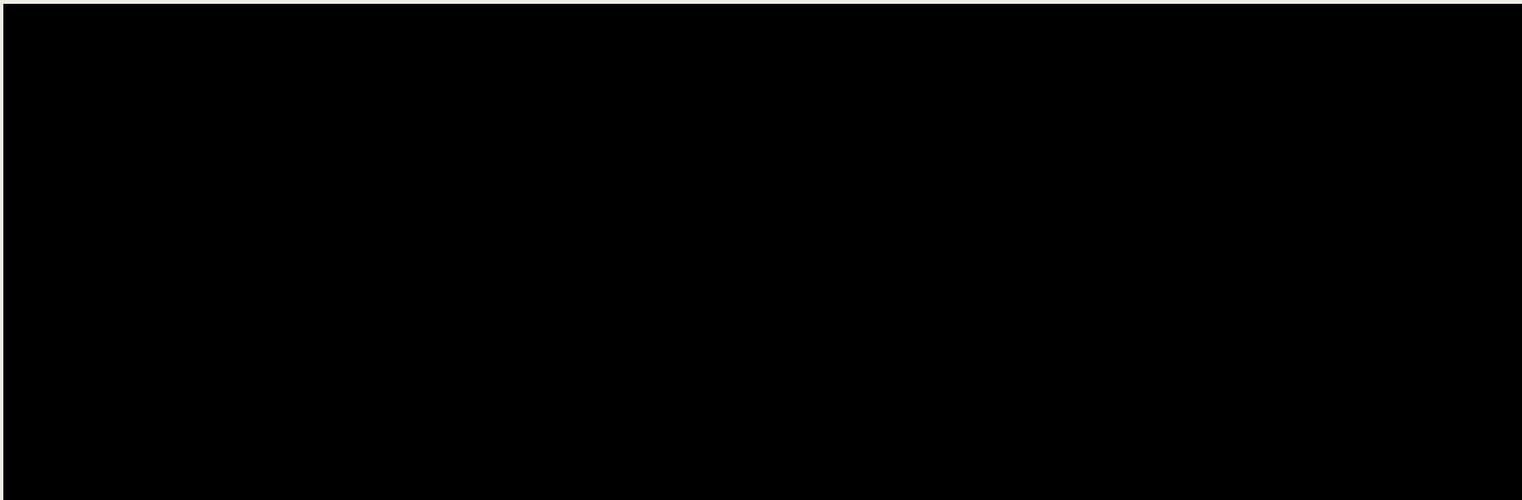
Inform Parents

5. The Bucklers

Educate Students

6. The Media

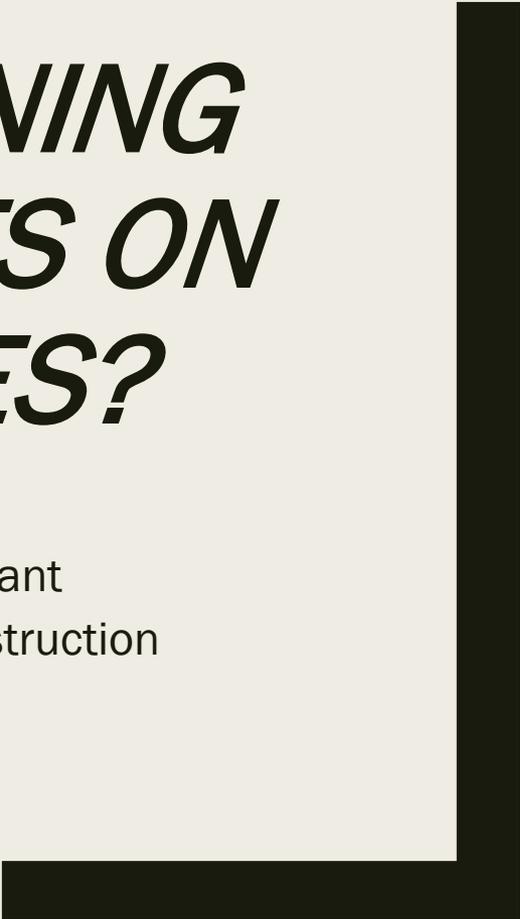
Provide press releases and public awareness tools.



Early Results



- Better accepted by elementary, students are staying in their seats
- Drivers report improved discipline
- Adopting a policy and enforcing the policy are different things, administration support is critical
- Increased interest in other LEAs



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