

School Bus Seat Belts

**Everything you Always Wanted
to Know . . .**

Massachusetts Association for
Pupil Transportation
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We'll Discuss

- Federal and state regulatory status
- Safety Issues
- Operational issues
- Legal issues
- Costs
- Anything else that comes to mind

Federal Status

- NHTSA Final Rule October 2008
 - Lap/shoulder belts for small buses as of 10/11
 - Higher seat backs in all buses as of 10/09
 - Standards for installation of belts in large buses
- Petitions for reconsideration
 - Only frontal-impact tests
 - Safety disparity
- October 2010 amendments to final rule
 - Three technical amendments; all other petitions denied

Federal Status

- August 2011 response to CAS petition
 - 22 signatories call for mandate for 3-point belts
 - NHTSA denies, citing safety of buses, cost
 - New analysis shows federal mandate for belts would result in 10-19 more student fatalities annually
- DOT obligated to consider cost/benefit
 - \$26m to \$32m per equivalent life

State Status

- New York 1987 – lap belts, no use requirement
- New Jersey 1992 – lap belts
- Florida 2001 – lap belts by default
- California 2004 – lap/shoulder belts
- Louisiana 1999 – not implemented pending funding

State Status

- Texas 2007
 - Mandated lap/shoulder belts in new school buses and activity buses, effective September 2010
 - Funding shortfall created grant program
 - Estimated cost of mandate \$380m; appropriated \$10m; agency cut to \$3.6m
 - Districts may choose to apply for incremental costs
 - Funding on priority basis, with small buses having top priority, followed by districts with high crash ratios
 - Districts must include policies for training, monitoring and enforcing usage
 - Continued funding questionable

State Status

- Connecticut – June 2010
 - Establish seat belt account funded by \$50 from restoration fees to reimburse 50% of sales tax on new buses with lap/shoulder belts
 - DMV administers fund starting 7/11
 - District submits agreement and application for reimbursement of 50% of sales tax
 - District must notify parents of availability of restraints
 - District must train students in proper use
 - Districts, carriers, and drivers protected from liability

State Status

- Alabama – 2007
 - \$1.4 million 3-year pilot study, 12 buses in 10 districts
 - Report issued October 2010
 - Adding lap/shoulder belts to state buses will reduce fatalities by 39% and injuries by 13% (0.13 deaths and 7.6 injuries)
 - Net benefit from lap/shoulder belts over a 10-year fleet cycle ranges from -\$104 million to -\$125 million
 - Conclusion: funding better used to improve loading zone safety

State Status

- Massachusetts
 - In 2010 session, 6 bills filed; 1 bill approved by Public Safety Committee, died in house
 - This year, 4 bills filed; none reported out of committee

Safety Issues

- Lap/shoulder belts improve protection
 - Huntsville, AL: 1 of 4 fatalities and many serious injuries could have been prevented
 - Milton, FL: lap belts prevented serious injuries
 - Farmington, CT: appears that belt would have prevented fatality

Safety Issues

- Students safer in buses without belts than any other mode of transportation
 - 50% of students use school bus:
20 fatalities/year
 - 50% of students use other modes:
800 fatalities/year
 - Biggest risk: teen drivers

Safety Issues

- No seat belt carryover from bus to car
- 'Weapon' use insignificant
- Evacuation hindrance speculative
 - No data
 - Pros and cons

Operational Issues

- Belt usage
 - State and local experience
 - 75+% usage among elementary students
 - 0%-50% usage among middle and high students
 - Alabama study: 53% average proper use
 - Usage requirement necessary
 - Elementary priority for belt-equipped buses
 - CA and FL include in law

Operational Issues

- Usage enforcement
 - States leave enforcement to local districts
 - Follow normal discipline procedures
 - Driver responsible only for reminder
 - Monitors effective but expensive
 - Self-enforcement best

Operational Issues

- Training
 - Proper use critical
 - Improperly adjusted belt may be ineffective or dangerous
 - AL study: 8% of belts improperly used
 - Must be part of required safety training
 - FL, TX, CA, CT laws specifically require training
- Middle and high school proactive campaign

Operational Issues

- Behavior
 - Drivers report fewer discipline problems
 - Drivers report less bullying
 - Camera observations show fewer out-of-seat incidents

Operational Issues

- Deployment
 - Elementary routes
 - Risk-based policy
 - Route length
 - Route environment
 - Passenger density

Legal Issues

- Liability Protection
 - CA, FL, NJ, and CT laws protect driver, district, and contractor from liability for injuries caused by use, misuse or nonuse of seat belt
- No actions in seat belt states or districts
- AL lawsuit
 - Bus manufacturer and dealer not liable for making and selling buses without belts

Cost Considerations

- Upcharge for lap/shoulder belts ranges from \$8,000 - \$12,000
- CT OFA puts cost at \$49m - \$108m over 12 years (6,500 buses)
- AL study estimates \$117.6m - \$452.2m over 10 years (9,000 buses)

Cost Considerations

- Capacity
 - Three seating choices with l/s belts
 - 45” fixed position seat for 3 students
 - 30” fixed position seat for 2 students
 - 39” flexible seat for 2 or 3 students
 - All seats require more longitudinal space
 - Potential loss of one row

Cost Considerations

- Capacity
 - Flexible seats
 - Loss of capacity for middle and high school
 - 65 pp bus becomes 44 pp; 71 pp becomes 48
 - Winter coats, backpacks, larger bodies may create unacceptable crowding

Flex Seat



Cost Considerations

- Student load
 - 2001 CT survey
 - 15%-88% of eligible high schoolers ride
 - Median high school ridership: 57%
 - 2007 NSTA survey
 - Elementary 80% of capacity
 - Middle school 75% of capacity
 - High school 50% of capacity

Cost Considerations

- Student load
 - Using median values, a 65 pp bus has 52 passengers on elementary run, 49 passengers on middle school run, and 33 passengers on high school run.
 - Result: No overflow for primary or high school; 10% overflow for middle school; 15% for older elementary

Cost Considerations

- Student load
 - 2010 AL report
 - Average load 51 students per bus
 - With belts, 5%-15% of buses will be over capacity

Options

- Increase body size to get more seats
 - 72-passenger shell = 46 seats
 - 84-passenger shell = 54 seats
 - Cost is incremental increase in bus price
- Add another bus to accommodate excess elementary and middle school students
 - Cost is contract price of the bus or bus cost + operational expense

Final Thoughts

- Most parents think buses should have belts
- Most school district budgets are barely in the black – or are in the red
- What is the question we should be asking?
 - ~~“Will lap/shoulder belts make students safer?”~~
 - ~~“What is a child’s life worth?”~~

Final Thoughts

Which of our competing needs will provide the biggest benefit for our children?

Questions?

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