MEMORANDUM

TO: **BRUCE REED**
ELENA KAGAN

FROM: **TOM FREEDMAN**
MARY L. SMITH
DREW HANSEN

RE: **CHILD SAFETY IN COMMERCIAL AIRPLANES**

DATE: **JULY 18, 1997**

SUMMARY

An estimated 10,000 children each day fly as "lap children," held in the laps of an accompanying adult instead of being secured in a separate seat by a certified Child Restraint System (CRS). These children are exposed to serious risk of injury or death in case of an accident or turbulence. Current FAA policy is to "strongly encourage," but not mandate, the use of a CRS for children under two years of age. The FAA has opposed a CRS mandate because of fears that the increased cost of buying an extra seat would lead many families to drive, leading to a net increase in injury and death, and because there are some technical problems with adapting existing CRS's to airplane use. Legislation pending in the House (H.R. 754 and 1141) and Senate (S. 398) would require the use of CRS's for children under two years of age.

PROBLEM

Children under two years of age have long been permitted to sit in their parent's laps during air travel. An estimated 10,000 children per day travel in this manner. But safety experts say that an unrestrained child traveling in an adult's lap runs a much higher risk of injury or death in case of air turbulence or a plane crash than a child secured by a separate child restraint system (CRS) on an adjacent seat. From 1978-1994, five children under two died in plane accidents who would have lived had they been in child seats. During the same period, ten injuries to children under two might have been prevented by the use of child seats.

Several recent incidents involving "lap children" have brought the matter to the public's attention. On July 19, 1989, United Airlines Flight 232 crashed in Sioux City, Iowa. Of the four unrestrained children on that flight, one was found in an overhead bin 15 rows behind the original seat, and one died from smoke inhalation in the ensuing fire. On July 12, 1994, a DC-9 flown by US Air crashed in Charlotte, North Carolina. There were 37 fatal injuries on the flight, including a 9-month-old unrestrained child who was hurled three rows from her mother's arms and died of massive head injuries. Air turbulence also poses serious risks to the unrestrained child. On a flight in June of 1995, an unrestrained child flew through the air during a patch of turbulence, but was caught by a fellow passenger. In 1990, a DC-10 encountered turbulence near Puerto Rico.

The only injury on the flight was sustained by an unrestrained infant, who suffered a fractured skull.

The use of child restraint systems has prevented injury or death in several other airline accidents. On July 6, 1996, the engine of Delta Flight 1288 exploded on the runway in Pensacola, Florida. Several passengers were killed instantly, but a 15-month-old suffered only a scratch on her neck because her parents had strapped her into a CRS in a separate seat. On September 6, 1992, a Piper PA-30 crashed at Broussard, Louisiana. Parts of both wings and both horizontal stabilizers were torn off before impact. A four-year-old boy and ten-month-old girl who sat in child restraint systems in the rear bench seat suffered serious injuries, but survived. Their father was killed.

PROPOSED SOLUTION

Many organizations, including the National Transportation Safety Board (NTSB), the Aviation Consumer Action Project, and the Association of Flight Attendants (AFA), have supported legislation that would mandate the use of child restraint systems on commercial aircraft. On February 12, 1997, the White House Commission on Aviation Safety and Security Bills, headed by Vice President Gore, recommended that "all infants and small children below the weight of 40 pounds and under the height of 40 inches be restrained in an appropriate child restraint system, such as child safety seats, appropriate to their height and weight." Bills to this effect were introduced in the 104th Congress by Rep. Lightfoot (R-IA, H.R. 1309) and in the 105th Congress by Rep. DeFazio (D-OR, H.R. 754 and 1141) and Sen. Murray (D-WA, S. 398). Copies of H.R. 754 and 1141 and S. 398 are attached.[1]

POSSIBLE DIFFICULTIES WITH MANDATORY CRS LEGISLATION

1. Increased injury and death from travel diversion.

The FAA has refused to issue regulations mandating the use of child restraint systems because of fears that the increased cost to families of purchasing an extra seat would cause more of them to drive to their destination, leading to a net increase in injuries and fatalities.

A study by Apogee Research in 1990 found that the average cost of a trip to each family under mandatory CRS legislation would be $185, leading to a total additional expenditure of $252 million per year on airfare. Faced with this situation, Apogee predicted that 17% of families would forgo travel entirely or divert to another mode of travel, leading to a net increase of 1.6 fatalities, 4.8 serious injuries, and 218 minor injuries per year. The conclusions of this study were supported in broad outline by later studies by Windle and Dresner of the University of Maryland (1990) and in a briefing paper by McKenzie and Lee that was published by the Cato Institute (1990). Apogee conducted a second study for the FAA in 1993 coming to essentially the same conclusions. In the second study, however, Apogee contended that 95% of the safety gains of

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[1]H.R. 754 and S. 398 are almost identical; H.R. 1141 adds the provision that airlines would be prohibited from charging a price for the required additional seat that exceeds the lowest price charged by the carrier to any other paying passenger on the same flight.

mandatory CRS legislation could be realized at low additional cost by requiring airlines to reserve empty seats next to parents with young children until the plane was absolutely full.[2]

Finally, a DOT-FAA study conducted pursuant to section 522 of the Federal Aviation Authorization Act of 1994 confirmed the results of earlier studies. The DOT-FAA study found that a CRS mandate could prevent an estimated five infant fatalities over ten years. But the additional cost over ten years, assuming that the family pays full fare for every family seat, would be about $200 to each family, per family trip, leading to an additional cost to families of $109 million per year. In such a situation, 27% of families would still travel by air, 53% would not travel at all, and 20% would choose other modes of transportation. The shift to other modes of transportation would cause 82 more deaths among children and adults over ten years. Even if airlines responded to a mandatory CRS rule by lowering fares for infants or by some other marketing strategy, some travel diversion would still occur. The DOT-FAA study found that if carriers charged only 25% of the full fare, some families would still choose other forms of transportation, leading to a net increase of 17 child and adult deaths over ten years.

Instead of requiring CRS use, therefore, the FAA has embarked on a public education campaign strongly encouraging their use. In addition, Secretary Peña has asked carriers to establish incentives for parents to purchase seats for infants. Southwest Airlines, for instance, offers a discounted fare for children under two years of age.

But the results of these studies have been challenged by other organizations. The National Transportation Safety Board (NTSB), a longtime advocate of mandatory CRS legislation, has charged that the FAA studies are "based upon incomplete analysis."[3] The central contention of the NTSB is that airlines will not risk the revenue loss caused by entire families diverting to other forms of transportation, and will respond with innovations such as free seats for infants, group discounts, or special fares for traveling at off-peak times. In testimony before the U.S. House of Representatives on July 20, 1990, the Vice President of Operations for the Air Transport Association said that airlines would offer a special fare arrangement for families with infants "rather than risk the loss of one or more adult fares or perhaps an entire family unit." Even the DOT-FAA study concluded that there would be no net increase in infant fatalities if airlines charged 20% of the full fare, although travel diversion in this scenario would still lead to an additional 12.8 non-infant fatalities over ten years. Of course, if airlines chose not to charge to provide separate seats for infants in CRS's, there would be no net increase in deaths or injuries.

In response to the FAA studies, the Association of Flight Attendants (AFA) commissioned a study by Darryl Jenkins, a visiting scholar at the International Institute of Tourism Research at

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[2]According to a July 3, 1997 article in the *New York Times,* many airlines will often reserve the seat next to a parent who does not buy a ticket for an infant. But these seats are not guaranteed on heavily booked flights.

[3]Testimony of Barry Sweedler, Director of the Office of Safety Recommendations, National Transportation Safety Board, before the Subcommittee on Aviation of the House Committee on Transportation and Infrastructure, August 1, 1996, p. 2.

George Washington University, to re-examine the economic arguments on requiring CRS use. The AFA study contended that the FAA studies were based on incorrect modeling assumptions. According to the AFA study, the FAA studies did not have key data to determine price sensitivity, used an industry demand curve that unrealistically simplified a complex situation, did not take into account the price competition generated by low-fare carriers, and did not take into account the effects of income sensitivity. Basically, the contentions of the AFA study are 1.) that the airline industry is increasingly dominated by low-cost carriers, especially on frequently traveled routes, who are forcing prices down, and 2.) that the FAA studies incorrectly used "price elasticity" (who would choose not to fly if the cost increased) as a surrogate for "cross-elasticity" (who would switch into other modes of transportation, such as automobiles, if the cost of flying increased).

A key to resolving this dispute seems to be whether or not airlines are willing to follow the lead of Southwest Airlines and offer specially discounted fares for children under two years of age. **The cuts in fares for children under two announced in the last two weeks seems to indicate that airlines are willing to cut fares to encourage families to buy a separate seat for their young child.** On July 2, 1997, American Airlines announced that children under two could ride in a separate seat for a fare of only 50% of the fare of the accompanying adult.[4] This policy was quickly adopted by United Airlines, Delta, Northwest, and Continental. Contrary to FAA assumptions, the new pricing policy would not lead to a loss of airline revenue but could even lead to a small net gain. Robert W. Baker, the Vice President of Operations of American airlines, said in the July 3, 1997 *New York Times* that American expected a modest increase in revenue as a result of the new fare.

2. Technical difficulties with CRS use in airplanes.

The second main argument against mandatory CRS legislation is that there are technical difficulties with using existing CRS's in airplanes. **But even with these difficulties, children under two are always safer in an existing CRS than on the lap of an accompanying adult.** The FAA currently recommends that children weighing under 20 pounds be restrained in a certified, rear-facing CRS, that children weighing between 20 and 40 pounds be restrained in a certified, forward-facing CRS, and that children weighing over 40 pounds be strapped in a regular lap belt. Margaret Gilligan, FAA Deputy Associate Administrator for Regulation and Certification, said last year in testimony before the House Subcommittee on Aviation that although the FAA is continuing their research on CRS design to achieve a greater safety margin, "no one contests our finding that children are better off in currently-marketed, approved CRS's [than in the lap of an accompanying adult]."[5]

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[4]Because the FAA studies are based on full-fare data, a 50% discount from the fare of the accompanying adult could approach the FAA's 20% threshold for no net gain in infant fatalities from travel diversion. If the accompanying adult was traveling on a special reduced-price ticket, for instance, a 50% discount on such a fare could be a considerable markdown from the price of a full-fare ticket.

[5]Margaret Gilligan, Testimony before the Subcommittee on Aviation of the House Committee on Transportation and Infrastructure, August 1, 1996, p. 5.

A major study by the Civil Aeromedical Institute (CAMI) in 1994 also found that while current CRS designs were not perfect, they still provided more protection than sitting on the lap of an adult. An infant in a front-facing CRS, although still exposed to serious risks, was found to be safer than if he or she were held by an accompanying adult. The use of a rear-facing CRS, though, was found to be a "definite safety benefit."[6] However, both front- and rear-facing CRS's were found to be often difficult to install and inconvenient to other passengers and staff. A forward-facing CRS is sometimes too big to install in seats with fixed arm rests, and airline lap belts often do not suitably secure the CRS to the seat. In addition, the lap belt does not always protect the child from being thrown out of the CRS and hitting his or her head on the forward row seat. A rear-facing CRS often interferes with passage between seat rows and the recline motion of a forward row seat.

Because of these difficulties, many efforts are currently underway to develop a CRS that would be more suitable for airline use:

- The Society of Automotive Engineers (SAE), an ad-hoc group, is currently trying to develop a standard of compatibility between seats for cars and seats for airplanes.
- The FAA is working on developing new types of restraints for children and better ways to secure a conventional CRS to an airplane seat.
- The FAA is also developing a prototype "platform" for in-seat installation of a forward-facing CRS, which in preliminary tests has significantly increased the effectiveness of forward-facing CRS's.
- Two projects are currently underway, one in the United States and one in Canada, to develop an airplane-specific CRS. Both prototypes have been tested at CAMI in both forward- and rear-facing positions, and both performed much better than any currently available CRS.

In short, the use of any certified CRS provides better protection than being carried on the lap of an accompanying adult, although a rear-facing CRS is generally preferable to a forward-facing one. Advances in technology for an airplane-specific CRS and for better installation of conventional CRS devices should lead to even greater safety benefits for young children.

CONCLUSION

The recent fare cuts by U.S. airlines for children under two years old, the proven safety record of existing CRS's in airplanes, and the ongoing development of better CRS's seem to remove many of the problems with mandatory CRS legislation. H.R. 754 and 1141 and S. 398 would follow the recommendations of the NTSB, the Gore Commission, and many other organizations by requiring children under two years of age to be restrained in a CRS in a separate seat, potentially preventing several injuries and fatalities among infants in the next ten years.

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[6]Civil Aeromedical Institute, "The Performance of Child Restraint Devices in Transport Airplane Passenger Seats," OAM Report AM-94-19, September, 1994, p. 22.

FILE h754.ih

HR 754 IH

105th CONGRESS

1st Session

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft.

IN THE HOUSE OF REPRESENTATIVES

February 13, 1997

Mr. DEFAZIO (for himself, Mr. SHAYS, Mr. CONYERS, Mr. HINCHEY, Mr. FILNER, Mrs. MORELLA, Mr. ABERCROMBIE, Mr. NADLER, Mr. EVANS, Mr. HORN, Ms. WOOLSEY, Mr. BLAGOJEVICH, Ms. NORTON, Ms. JACKSON-LEE of Texas, Mr. RAHALL, Mrs. CARSON, Mrs. MALONEY of New York, Mr. MASCARA, Mr. FLAKE, Mr. GONZALEZ, Mrs. CLAYTON, Mr. LANTOS, Ms. PELOSI, and Mr. DAN SCHAEFER of Colorado) introduced the following bill; which was referred to the Committee on Transportation and Infrastructure

A BILL

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft.

[Italic->] Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, [<-Italic]

SECTION 1. CHILD RESTRAINT SYSTEMS ON COMMERCIAL AIRCRAFT.

(a) IN GENERAL- Chapter 447 of title 49, United States Code, is amended by adding at the end the following new section:

`Sec. 44725. Child restraint systems

`Not later than 90 days after the date of the enactment of this section, the Secretary shall issue regulations requiring the use of child safety restraint systems approved by the Secretary on any aircraft operated by an air carrier in providing interstate air transportation, intrastate transportation, or overseas air transportation. Such regulations shall establish age or weight limits for children who are to use such systems.'.

(b) CLERICAL AMENDMENT- The table of sections at the beginning of such chapter is amended by adding at the end the following new item:

`44725. Child restraint systems.'.

SEC. 2. INTERNATIONAL STANDARD.

It is the sense of Congress that the United States representative to the International Civil Aviation Organization should seek an international standard to require that passengers on a civil aviation aircraft be restrained on takeoff and landing and when directed by the captain of such aircraft.

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HR 1141 IH

105th CONGRESS

1st Session

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft and to restrict the fares charged by air carriers for air transportation provided to children under 3 years of age.

IN THE HOUSE OF REPRESENTATIVES

March 20, 1997

Mr. DEFAZIO introduced the following bill; which was referred to the Committee on Transportation and Infrastructure

A BILL

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft and to restrict the fares charged by air carriers for air transportation provided to children under 3 years of age.

[Italic->] Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, [<-Italic]

SECTION 1. CHILD RESTRAINT SYSTEMS ON COMMERCIAL AIRCRAFT.

(a) IN GENERAL- Chapter 447 of title 49, United States Code, is amended by adding at the end the following new section:

`Sec. 44725. Child restraint systems

`Not later than 90 days after the date of the enactment of this section, the Secretary shall issue regulations requiring the use of child safety restraint systems approved by the Secretary on any aircraft operated by an air carrier in providing interstate air transportation, intrastate transportation, or overseas air transportation. Such regulations shall establish age or weight limits for children who are to use such systems.'.

(b) CLERICAL AMENDMENT- The table of sections at the beginning of such chapter is amended by adding at the end the following new item:

`44725. Child restraint systems.'.

SEC 2. AIR TRANSPORTATION PRICES FOR CHILDREN UNDER 3 YEARS OF AGE.

(a) MAXIMUM PRICE-

(1) IN GENERAL- Chapter 415 of title 49, United States Code, is amended by adding at the end the following new section:

`Sec. 41512. Air transportation prices for children under 3 years of age

`(a) IN GENERAL- An air carrier providing air transportation to a child under 3 years of age on a scheduled flight to any final destination may not charge a price for such air transportation that exceeds the lowest price charged by the air carrier for such air transportation to any other paying passenger on such flight with the same final destination.

`(b) DEFINITIONS- In this section, the following definitions apply:

`(1) AIR CARRIER- The term `air carrier' includes foreign air carriers.

`(2) AIR TRANSPORTATION- The term `air transportation' includes intrastate air transportation.'.

(2) CLERICAL AMENDMENT- The table of sections at the beginning of such chapter is amended by adding at the end the following new item:

`41512. Air transportation prices for children under 3 years of age.'.

(b) SENSE OF CONGRESS- It is the sense of Congress that air carriers should provide air transportation to children under 3 years of age at no charge.

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S 398 IS

105th CONGRESS

1st Session

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft, and for other purposes.

IN THE SENATE OF THE UNITED STATES

March 5, 1997

Mrs. MURRAY introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

A BILL

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft, and for other purposes.

[Italic->] Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, [<-Italic]

SECTION 1. CHILD SAFETY RESTRAINT SYSTEMS ON COMMERCIAL AIRCRAFT.

(a) IN GENERAL- Chapter 447 of title 49, United States Code, is amended by adding at the end the following new section:

`Sec. 44725. Child safety restraint systems

`(a) IN GENERAL- Not later than 90 days after the date of enactment of this section, the Secretary of Transportation shall issue regulations requiring the use of child safety restraint systems that have been approved by the Secretary on any aircraft operated by an air carrier in providing interstate air transportation, intrastate air transportation, or foreign air transportation.

`(b) AGE OR WEIGHT LIMITS- The regulations issued under this section shall establish age or weight limits for children who use the child safety restraint systems.'.

(b) CLERICAL AMENDMENT- The chapter analysis for chapter 447 of title 49, United States Code, is amended by adding at the end the following new item:

`44725. Child safety restraint systems.'.

SEC. 2. INTERNATIONAL STANDARD.

It is the sense of Congress that the United States representative to the International Civil Aviation Organization should seek an international standard to require that passengers on a civil aviation aircraft be restrained--

(1) on takeoff and landing; and

(2) when directed by the captain of such aircraft.

Sunday Times piece

child seats.

TOM -

Contacts from Air Transport Assoc -

* John Meenan, VP Policy and Planning 626-4274

(testified @ hearing...)

Mike Wascom, Federal Affairs 626-4033

Attachment: Testimony from ATA @ hearing

Original Memo from me

factors. I won't argue whether or not the study is a good one or a bad one. But let me just pose to you, Mr. Sweedler, a question.

Assuming there is no diversion, all five million enplanements continue, nobody goes to cars, it's going to cost the traveling public somewhere between $100 million and $1 billion, assuming we have to make some assumptions on when airlines are going to give them discount fares or let them fly free if it's off-peak, or whatever, but it's going to be a significant dollar amount to the traveling public. I think that's a given. So somewhere between $100 million and $1 billion, assuming there are occasions when people pay a fare.

If you had a magic wand and could apply that half a billion dollars to your top-priority safety concerns, would this be how you spent the money, or might you consider spending it on detectors that would identify chemical explosives, or whatever? And that's what our committee has to decide.

We are going to reallocate how the traveling public's money is spent. Would we save more children's lives with chemical weapons detectors that kept plastic explosives from going on an airplane with that $500 million, or would we save more children's lives by mandating that that $500 million be spent on child safety seats?

Mr. SWEEDLER. That's a tough question, sir. First of all, we're not quite sure how much the cost would be to families and how the airlines would respond if there was a requirement. The cost might not be as high as some of the estimates.

Some of the other things to consider is that what we're actually asking for is just one extra step from what the FAA is actually doing.

The FAA certainly agrees with us, as does everyone else, that the children need to be restrained, and they are energetically going out and pushing this through educational programs.

So what we're saying, we think there shouldn't be an option for safety. What they think is the best thing for children and are advocating that, we think should be the requirement for all children.

Mr. GEREN. I understand that, but say five million enplanements. Say it only costs $20. That's $100 million. If you were given in NTSB $100 million to spend on safety priorities, where would you apply it?

Mr. SWEEDLER. It's the money that the passengers would be paying, to a great extent.

Mr. GEREN. Absolutely. And——

Mr. SWEEDLER. You heard the testimony of the parents. They had to make a decision, and they were willing to spend $200. If it was only $20, I'm sure there wouldn't be that much debate.

Mr. GEREN. I'm sure the parents also would like to have detectors that spotted plastic explosives, and they also—there are a lot of things. I'm just asking you, as the NTSB, when you all identify your safety priorities, if we gave you $100 million and you were entrusted with saving lives, where would you apply it, top priority?

Mr. SWEEDLER. As I said, that's probably a very tough question to answer. We have quite a few issues that need addressing. There is a long list of safety issues that need addressing, and I think it's probably best for us to try to lay out what the issues are and try not to prioritize which safety issue is more important than other safety issues.

There are certain safety issues, like students on school buses, that are so emotional, even though the accident rates are extremely low, parents and people in the communities just demand whatever needs to be done to protect children is done, even though that accident rates are minuscule compared to other areas, and this seems to be one of those areas where it just seems to make common sense to go ahead and take that extra step.

Mr. GEREN. I appreciate that, and we're politicians, so we probably appreciate that as much as anybody—probably more than anybody—and sometimes Government does not act rationally, but we are charged with apportioning how the traveling public's dollars are going to be spent, and if we are going to spend the money in a way that is going to save the most lives, bearing in mind there are political considerations and there are emotions and nobody on this—as Ms. Maillett said earlier, there is not a calloused person in this room. Everybody in this room wants to save children's lives. Will you save more children's lives by spending that $100 million to $500 million on chemical weapons detectors, or will you save more children's lives by spending that $500 million on safety seats?

I think that's a question we have to ask. We all want to save the most number of children's lives with the limited resources we have, and so I just pose that to the panel.

Thank you, Mr. Chairman.

Mr. DUNCAN. Thank you very much, Mr. Geren, once again, for some very good points and questions.

All right. Thank you, ladies and gentleman, for this very helpful testimony.

We'll call up next panel number two. Panel two consists of: John M. Meenan, who is vice president of policy and planning for the Air Transport Association; Patricia A. Friend, who is the international president of the Association of Flight Attendants, AFL–CIO; Jan Brown-Lohr, who is a flight attendant for United Airlines and also represents the Association of Flight Attendants; and Mr. Thomas Bennington, who is president of CRS–A Corporation.

Thank you very much for being with us. I'll do like I did on the last panel, and we'll have the witnesses testify in the order in which they are listed on the agenda of the hearing, and that means, Mr. Meenan, that you will go first.

TESTIMONY OF JOHN MEENAN, VICE PRESIDENT, POLICY AND PLANNING, AIR TRANSPORT ASSOCIATION OF AMERICA; PATRICIA A. FRIEND, INTERNATIONAL PRESIDENT, ASSOCIATION OF FLIGHT ATTENDANTS, AFL–CIO; JAN BROWN-LOHR, FLIGHT ATTENDANT, UNITED AIRLINES, AND MEMBER, ASSOCIATION OF FLIGHT ATTENDANTS, AFL–CIO; AND THOMAS BENNINGTON, PRESIDENT, CRS–A CORPORATION

Mr. MEENAN. Thank you, Mr. Chairman, members of the committee. My name is John Meenan, and I'm vice president for policy and planning for the Air Transport Association of America.

Let me begin by again thanking the committee for holding today's hearing on the subject of use of infant seats aboard aircraft. This is an issue of vital interest to all of us, particularly those of us in the airline busin . We all want everyone aboard our aircraft

to fly safely, but we share a particular concern with the safety of our smallest and youn[illegible] passengers.

Candidly, we are frustrated at this point with the lack of resolution by the regulatory authorities of what has become a circular debate over how to best ensure that infants and small children are appropriately belted in during take-off, taxi, landing of an aircraft.

Let me explain briefly.

During the 1980s, the airlines began to raise concerns over the safety implications of Federal Air Regulation 121.311, which, is the regulation that allows lap-held children under the age of two. Those concerns culminated in February 1990 with an ATA Petition to the FAA which would have required that all passengers, including those under the age of two, be appropriately restrained.

Subsequently, the FAA performed the well-known risk/risk analysis of the proposal and concluded that such a regulation could well result in an increase in infant deaths due to diversion of travelers to other less-safe modes, including the highway mode.

Although understandably controversial, it must be said that this type of systematic analysis of any regulatory action bears careful thought and attention if we are to avoid doing inadvertent harm. Frankly, the FAA's point is a very valid concern.

Later, while the ATA petition was still pending, additional facts began to emerge concerning the design adequacy of certain child restraint systems currently approved for use aboard aircraft.

In a nutshell, the Civil Aero-Medical Institute, CAMI, raised substantial concerns as to the effectiveness of many forward-facing devices due to variations in the device attachment points on aircraft versus automotive seats.

Almost simultaneously with the release of that information concerning the device effectiveness, the FAA approached the airlines to suggest that the best way to address the overall issue of the use of child restraints was through public education, and they hoped through carrier programs to promote the use of these devices.

While the carriers agree that public education and market-driven solutions are to be preferred to regulation, where possible, the carriers also believe that we need a logical and well-structured approach to these issues.

We told the FAA then, and we continue to believe, that three things must happen before we can move forward:

First, the regulatory authorities must decide on the basis of size and weight which children actually require specialized restraint devices.

Second, we must have design standards for these restraint systems which are effective in all modes of transportation and can be interchangeably used across modes.

Third, we must take the steps necessary to phase in those appropriate devices in a seamless and organized fashion. Only when that occurs will we be in a position to move forward with either an education and promotion campaign to assure the appropriate use of these systems or to pursue some type of mandatory requirement.

At the request of the FAA, we withdrew our petition to require the use of these devices in May of last year. This was done in order to help clear away what were described as complications for the FAA in moving to resolve these issues. As we said at that time: "We note that this action does not reflect a fundamental change in policy. The airlin[illegible] remain absolutely committed to the safety of all passengers, including, if not especially, their youngest passengers. We are hopeful, however, that by withdrawing this petition in the context of the FAA's plan to address the key adequacy issue, real and rapid progress will result.

We look forward to working with the FAA, Congress, the flight attendants, and all interested parties in finding the correct solution to this matter." "It is our expectation," we went on, "that once the FAA has addressed the design adequacy issues, appropriate market-driven solutions will emerge to ensure that all traveling infants are appropriately seated and restrained. Obviously, should circumstances warrant, the airlines may opt to resubmit an updated petition."

Unfortunately, to date the design adequacy issues remain unresolved. DOT, FAA headquarters, the FAA technical center, CAMI, NHTSA, and the Society of Automotive Engineers all continue to chase bits and pieces of this problem, without anyone taking charge of finding a real solution.

To our knowledge, no one has mapped a course to really resolve all these matters on the device adequacy issue. Last week we learned, for example, of the new CAMI tests which were just performed on a platform device to be placed under the infant seat. We hope that is a positive sign, but the timing and the test procedures obviously leave many unanswered questions.

In conclusion, Mr. Chairman, I would summarize our position as follows:

We believe that all passengers, including children, should be appropriately restrained.

We believe that the FAA's risk analysis, which raises substantial concerns about broader child safety issues, and the CAMI test results, which question the design integrity of certain devices, must be considered and resolved.

We believe that with the proper resolution of the device adequacy issue, market-driven solutions would likely provide the most effective means to address the FAA's risk analysis issues. At the same time, we recognize the possible role for mandatory action if it is ultimately determined that market forces do not produce optimum results.

Thank you very much for the opportunity to appear here. I would, of course, be happy to respond to questions.

Mr. DUNCAN. Thank you very much, Mr. Meenan.

The next witness will be Ms. Friend.

Ms. FRIEND. Chairman Duncan, Mr. Lipinski, members of the subcommittee, my name is Patricia Friend. I'm the international president of the Association of Flight Attendants, AFL–CIO.

Thank you for this opportunity to testify on the issue of mandating aircraft child restraint seats for children under the age of two.

AFA has long supported appropriate seat restraint devices for all passengers, including infants and small children. We commend Congressman Lightfoot for his tireless fight through the years to assure that children are protected when they fly, and for reintroducing H.R. 1309.

4. ATA notes that six federal entities are involved, in some or another, with the child safety seat design issue. What would ATA suggest by way of organization to get this issue focused and moving?

Answer. It is the view of the Air Transport Association that given the role of the Department of Transportation as the overall organizational authority responsible for all of the governmental organizations involved in this matter, that an individual with competent authority within the Department should be assigned the responsibility to resolve these matters by a date certain with instructions to establish uniform design standards for child restraint devices for use in all modes of transportation.

Statement of the
Air Transport Association of America
Transportation and Infrastructure Committee
Aviation Subcommittee
U.S. House of Representatives
Concerning Use of Child Safety Seats Aboard Aircraft
August 1, 1996

My name is John Meenan and I am the Vice President for Policy and Planning of the Air Transport Association of America. Let me begin by thanking this Committee for holding today's hearing on the subject of the use of infant seats aboard aircraft. This is an issue of vital interest to all of us -- particularly to those of us in the airline industry. We all want everyone to be as safe as possible when they fly -- but we share a particular concern with the safety of our youngest passengers.

Candidly we are frustrated at this point with the lack of resolution by the regulatory authorities of what has become a circular debate over how to best insure that infants and small children are appropriately belted in during the taxi, takeoff and landing of an aircraft. Let me explain briefly:

- During the 1980s the airlines began to raise concerns over the safety implications of FAR 121.311 which, in effect, allows "lap held" children, under the age of two, aboard aircraft.

- These concerns culminated in a February 1990 ATA petition to the FAA which would have required that all passengers, including those under two, be appropriately restrained.

- Subsequently, the FAA performed the now well known "risk/risk analysis" of the proposal and concluded that such a regulation could well result in an increase in infant deaths due to the diversion of travelers from air to the less safe, highway mode. Although understandably controversial, it must be said that this type of systematic analysis of any regulatory action bears careful thought and attention if we are to avoid inadvertent harm. Frankly, the FAA's point is a very valid concern.

- Still later, while the ATA petition was still pending, additional facts began to emerge concerning the design adequacy of certain child restraint systems currently approved for use aboard aircraft by the government. In a nutshell, the Civil Aeromedical Institute raised substantial questions as to the effectiveness of many forward facing devices due to variations in the device attachment points on aircraft versus automotive seats.

- Almost simultaneously with the release of the information concerning device effectiveness, however, the FAA approached the airlines to suggest that the best way to address the overall issue of the use of child restraints was through public education and, they hoped, through carrier programs to promote the use of these devices. While the carriers agree that public education and market driven solutions are to be preferred to regulation where possible, the carriers also believe that we need a logical, well structured approach to these issues.

We told the FAA then, and continue to believe, that three things must happen before we move forward. First, the regulatory authorities must decide on the basis of size and weight which children require specialized restraint devices; second, we must have design standards for these child restraint systems which are effective in all modes of transportation and can be used interchangeably across modes. Third, we then must take the steps necessary to phase in those appropriate devices in a seamless and organized fashion. Only when that occurs will we be in a position to move forward with either an education and promotion campaign to assure the use of appropriate systems or to pursue some type of mandatory requirement.

At the request of the FAA, we withdrew our petition to require use of these devices in May of last year. This was done in order to help clear away what were described as "complications" for the FAA in moving to resolve these issues. As we said at that time:

> "We would note that this action does not reflect a fundamental change in policy -- the airlines remain absolutely committed to the safety of all passengers including (if not especially) their youngest passengers. We are hopeful, however, that by withdrawing this petition in the context of FAA's plan to address the key adequacy issue, real and rapid progress will result. We look forward to working with the FAA, Congress, the flight attendants and all interested parties in finding the correct solution to this matter.

It is our expectation that once the FAA has addressed the design adequacy issues appropriate, market based solutions will emerge to ensure that all traveling infants are appropriately seated/restrained. Obviously, should circumstances warrant, the airlines may opt to resubmit an updated version of the withdrawn petition. We presently anticipate a reassessment of this situation early next year."

Unfortunately, to date the design adequacy issues remain unresolved. DOT, FAA Headquarters, the FAA Technical Center, CAMI, the National Highway Traffic Safety Administration, the Society of Automotive Engineers, all continue to have bits and pieces of this without anyone seeming to take charge of forcing resolution of the key issues. To our knowledge, no one has mapped a course to really resolve these matters. (Last week we learned for example that "new" CAMI tests were just performed on a platform device to be placed under the infant seat which improved performance. While we hope that this is a positive sign, the timing and test procedures leave many unanswered questions.)

In conclusion, Mr. Chairman, I would summarize our position as follows:

1. We believe that all passengers, including children, should be appropriately restrained.

2. We believe that both the FAA's risk analysis, which raises substantial concerns about broader child safety issues, and the CAMI test results, which

question the design integrity of certain devices, must be considered and resolved.

3. We believe that with the proper resolution of the device adequacy issue, market driven solutions would likely provide the most effective means to address the FAA's risk analysis issues. At the same time we recognize the possible role for mandatory action if it is ultimately determined that market forces do not produce optimum results.

Thank you very much for the opportunity to appear before you today. I would be pleased to respond to any questions.

MEMORANDUM

TO: TOM FREEDMAN, MARY L. SMITH

FROM: DREW HANSEN

RE: CHILD SAFETY IN COMMERCIAL AIRPLANES

DATE: JULY 12, 1997

SUMMARY

An estimated 10,000 children each day fly as "lap children," held in the laps of an accompanying adult instead of being secured in a separate seat by a certified Child Restraint System (CRS). These children are exposed to serious risk of injury or death in case of an accident or turbulence. Current FAA policy is to "strongly encourage," but not mandate, the use of a CRS for children under two years of age. The FAA has opposed a CRS mandate because of fears that the increased cost of buying an extra seat would lead many families to drive, leading to a net increase in injury and death, and because there are some technical problems with adapting existing CRS's to airplane use. Legislation pending in the House (H.R. 754 and 1141) and Senate (S. 398) would require the use of CRS's for children under two years of age.

PROBLEM

Children under two years of age have long been permitted to sit in their parent's laps during air travel. An estimated 10,000 children per day travel in this manner. But safety experts say that an unrestrained child traveling in an adult's lap runs a much higher risk of injury or death in case of air turbulence or a plane crash than a child secured by a separate child restraint system (CRS) on an adjacent seat. From 1978-1994, five children under two died in plane accidents who would have lived had they been in child seats. During the same period, ten injuries to children under two might have been prevented by the use of child seats.

Several recent incidents involving "lap children" have brought the matter to the public's attention. On July 19, 1989, United Airlines Flight 232 crashed in Sioux City, Iowa. Of the four unrestrained children on that flight, one was found in an overhead bin 15 rows behind the original seat, and one died from smoke inhalation in the ensuing fire. On July 12, 1994, a DC-9 flown by US Air crashed in Charlotte, North Carolina. There were 37 fatal injuries on the flight, including a 9-month-old unrestrained child who was hurled three rows from her mother's arms and died of massive head injuries. Air turbulence also poses serious risks to the unrestrained child. On a flight in June of 1995, an unrestrained child flew through the air during a patch of turbulence, but was caught by a fellow passenger. In 1990, a DC-10 encountered turbulence near Puerto Rico. The only injury on the flight was sustained by an unrestrained infant, who suffered a fractured skull.

The use of child restraint systems has prevented injury or death in several other airline accidents. On July 6, 1996, the engine of Delta Flight 1288 exploded on the runway in Pensacola, Florida. Several passengers were killed instantly, but a 15-month-old suffered only a scratch on her neck because her parents had strapped her into a CRS in a separate seat. On September 6, 1992, a Piper PA-30 crashed at Broussard, Louisiana. Parts of both wings and both horizontal stabilizers were torn off before impact. A four-year-old boy and ten-month-old girl who sat in child restraint systems in the rear bench seat suffered serious injuries, but survived. Their father was killed.

PROPOSED SOLUTION

Many organizations, including the National Transportation Safety Board (NTSB), the Aviation Consumer Action Project, and the Association of Flight Attendants (AFA), have supported legislation that would mandate the use of child restraint systems on commercial aircraft. On February 12, 1997, the White House Commission on Aviation Safety and Security Bills, headed by Vice President Gore, recommended that "all infants and small children below the weight of 40 pounds and under the height of 40 inches be restrained in an appropriate child restraint system, such as child safety seats, appropriate to their height and weight." Bills to this effect were introduced in the 104th Congress by Rep. Lightfoot (R-IA, H.R. 1309) and in the 105th Congress by Rep. DeFazio (D-OR, H.R. 754 and 1141) and Sen. Murray (D-WA, S. 398). Copies of H.R. 754 and 1141 and S. 398 are attached.[1]

POSSIBLE DIFFICULTIES WITH MANDATORY CRS LEGISLATION

1. Increased injury and death from travel diversion.

The FAA has refused to issue regulations mandating the use of child restraint systems because of fears that the increased cost to families of purchasing an extra seat would cause more of them to drive to their destination, leading to a net increase in injuries and fatalities.

A study by Apogee Research in 1990 found that the average cost of a trip to each family under mandatory CRS legislation would be $185, leading to a total additional expenditure of $252 million per year on airfare. Faced with this situation, Apogee predicted that 17% of families would forgo travel entirely or divert to another mode of travel, leading to a net increase of 1.6 fatalities, 4.8 serious injuries, and 218 minor injuries per year. The conclusions of this study were supported in broad outline by later studies by Windle and Dresner of the University of Maryland (1990) and in a briefing paper by McKenzie and Lee that was published by the Cato Institute (1990). Apogee conducted a second study for the FAA in 1993 coming to essentially the same conclusions. In the second study, however, Apogee contended that 95% of the safety gains of mandatory CRS legislation could be realized at low additional cost by requiring airlines to reserve

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[1]H.R. 754 and S. 398 are almost identical; H.R. 1141 adds the provision that airlines would be prohibited from charging a price for the required additional seat that exceeds the lowest price charged by the carrier to any other paying passenger on the same flight.

empty seats next to parents with young children until the plane was absolutely full.[2]

Finally, a DOT-FAA study conducted pursuant to section 522 of the Federal Aviation Authorization Act of 1994 confirmed the results of earlier studies. The DOT-FAA study found that a CRS mandate could prevent an estimated five infant fatalities over ten years. But the additional cost over ten years, assuming that the family pays full fare for every family seat, would be about $200 to each family, per family trip, leading to an additional cost to families of $109 million per year. In such a situation, 27% of families would still travel by air, 53% would not travel at all, and 20% would choose other modes of transportation. The shift to other modes of transportation would cause 82 more deaths among children and adults over ten years. Even if airlines responded to a mandatory CRS rule by lowering fares for infants or by some other marketing strategy, some travel diversion would still occur. The DOT-FAA study found that if carriers charged only 25% of the full fare, some families would still choose other forms of transportation, leading to a net increase of 17 child and adult deaths over ten years.

Instead of requiring CRS use, therefore, the FAA has embarked on a public education campaign strongly encouraging their use. In addition, Secretary Peña has asked carriers to establish incentives for parents to purchase seats for infants. Southwest Airlines, for instance, offers a discounted fare for children under two years of age.

But the results of these studies have been challenged by other organizations. The National Transportation Safety Board (NTSB), a longtime advocate of mandatory CRS legislation, has charged that the FAA studies are "based upon incomplete analysis."[3] The central contention of the NTSB is that airlines will not risk the revenue loss caused by entire families diverting to other forms of transportation, and will respond with innovations such as free seats for infants, group discounts, or special fares for traveling at off-peak times. In testimony before the U.S. House of Representatives on July 20, 1990, the Vice President of Operations for the Air Transport Association said that airlines would offer a special fare arrangement for families with infants "rather than risk the loss of one or more adult fares or perhaps an entire family unit." Even the DOT-FAA study concluded that there would be no net increase in infant fatalities if airlines charged 20% of the full fare, although travel diversion in this scenario would still lead to an additional 12.8 non-infant fatalities over ten years. Of course, if airlines chose not to charge to provide separate seats for infants in CRS's, there would be no net increase in deaths or injuries.

In response to the FAA studies, the Association of Flight Attendants (AFA) commissioned a study by Darryl Jenkins, a visiting scholar at the International Institute of Tourism Research at George Washington University, to re-examine the economic arguments on requiring CRS use.

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[2]According to a July 3, 1997 article in the *New York Times,* many airlines will often reserve the seat next to a parent who does not buy a ticket for an infant. But these seats are not guaranteed on heavily booked flights.

[3]Testimony of Barry Sweedler, Director of the Office of Safety Recommendations, National Transportation Safety Board, before the Subcommittee on Aviation of the House Committee on Transportation and Infrastructure, August 1, 1996, p. 2.

The AFA study contended that the FAA studies were based on incorrect modeling assumptions. According to the AFA study, the FAA studies did not have key data to determine price sensitivity, used an industry demand curve that unrealistically simplified a complex situation, did not take into account the price competition generated by low-fare carriers, and did not take into account the effects of income sensitivity. Basically, the contentions of the AFA study are 1.) that the airline industry is increasingly dominated by low-cost carriers, especially on frequently traveled routes, who are forcing prices down, and 2.) that the FAA studies incorrectly used "price elasticity" (who would choose not to fly if the cost increased) as a surrogate for "cross-elasticity" (who would switch into other modes of transportation, such as automobiles, if the cost of flying increased).

A key to resolving this dispute seems to be whether or not airlines are willing to follow the lead of Southwest Airlines and offer specially discounted fares for children under two years of age. **The cuts in fares for children under two announced in the last two weeks seems to indicate that airlines are willing to cut fares to encourage families to buy a separate seat for their young child.** On July 2, 1997, American Airlines announced that children under two could ride in a separate seat for a fare of only 50% of the fare of the accompanying adult.[4] This policy was quickly adopted by United Airlines, Delta, Northwest, and Continental. Contrary to FAA assumptions, the new pricing policy would not lead to a loss of airline revenue but could even lead to a small net gain. Robert W. Baker, the Vice President of Operations of American airlines, said in the July 3, 1997 *New York Times* that American expected a modest increase in revenue as a result of the new fare.

2. Technical difficulties with CRS use in airplanes.

The second main argument against mandatory CRS legislation is that there are technical difficulties with using existing CRS's in airplanes. **But even with these difficulties, children under two are always safer in an existing CRS than on the lap of an accompanying adult.** The FAA currently recommends that children weighing under 20 pounds be restrained in a certified, rear-facing CRS, that children weighing between 20 and 40 pounds be restrained in a certified, forward-facing CRS, and that children weighing over 40 pounds be strapped in a regular lap belt. Margaret Gilligan, FAA Deputy Associate Administrator for Regulation and Certification, said last year in testimony before the House Subcommittee on Aviation that although the FAA is continuing their research on CRS design to achieve a greater safety margin, "no one contests our finding that children are better off in currently-marketed, approved CRS's [than in the lap of an accompanying adult]."[5]

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[4]Because the FAA studies are based on full-fare data, a 50% discount from the fare of the accompanying adult could approach the FAA's 20% threshold for no net gain in infant fatalities from travel diversion. If the accompanying adult was traveling on a special reduced-price ticket, for instance, a 50% discount on such a fare could be a considerable markdown from the price of a full-fare ticket.

[5]Margaret Gilligan, Testimony before the Subcommittee on Aviation of the House Committee on Transportation and Infrastructure, August 1, 1996, p. 5.

A major study by the Civil Aeromedical Institute (CAMI) in 1994 also found that while current CRS designs were not perfect, they still provided more protection than sitting on the lap of an adult. An infant in a front-facing CRS, although still exposed to serious risks, was found to be safer than if he or she were held by an accompanying adult. The use of a rear-facing CRS, though, was found to be a "definite safety benefit."[6] However, both front- and rear-facing CRS's were found to be often difficult to install and inconvenient to other passengers and staff. A forward-facing CRS is sometimes too big to install in seats with fixed arm rests, and airline lap belts often do not suitably secure the CRS to the seat. In addition, the lap belt does not always protect the child from being thrown out of the CRS and hitting his or her head on the forward row seat. A rear-facing CRS often interferes with passage between seat rows and the recline motion of a forward row seat.

Because of these difficulties, many efforts are currently underway to develop a CRS that would be more suitable for airline use:

- The Society of Automotive Engineers (SAE), an ad-hoc group, is currently trying to develop a standard of compatibility between seats for cars and seats for airplanes.
- The FAA is working on developing new types of restraints for children and better ways to secure a conventional CRS to an airplane seat.
- The FAA is also developing a prototype "platform" for in-seat installation of a forward-facing CRS, which in preliminary tests has significantly increased the effectiveness of forward-facing CRS's.
- Two projects are currently underway, one in the United States and one in Canada, to develop an airplane-specific CRS. Both prototypes have been tested at CAMI in both forward- and rear-facing positions, and both performed much better than any currently available CRS.

In short, the use of any certified CRS provides better protection than being carried on the lap of an accompanying adult, although a rear-facing CRS is generally preferable to a forward-facing one. Advances in technology for an airplane-specific CRS and for better installation of conventional CRS devices should lead to even greater safety benefits for young children.

CONCLUSION

The recent fare cuts by U.S. airlines for children under two years old, the proven safety record of existing CRS's in airplanes, and the ongoing development of better CRS's seem to remove many of the problems with mandatory CRS legislation. H.R. 754 and 1141 and S. 398 would follow the recommendations of the NTSB, the Gore Commission, and many other organizations by requiring children under two years of age to be restrained in a CRS in a separate seat, potentially preventing several fatalities and deaths among infants in the next ten years.

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[6]Civil Aeromedical Institute, "The Performance of Child Restraint Devices in Transport Airplane Passenger Seats," OAM Report AM-94-19, September, 1994, p. 22.

FILE h754.ih

HR 754 IH

105th CONGRESS

1st Session

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft.

IN THE HOUSE OF REPRESENTATIVES

February 13, 1997

Mr. DEFAZIO (for himself, Mr. SHAYS, Mr. CONYERS, Mr. HINCHEY, Mr. FILNER, Mrs. MORELLA, Mr. ABERCROMBIE, Mr. NADLER, Mr. EVANS, Mr. HORN, Ms. WOOLSEY, Mr. BLAGOJEVICH, Ms. NORTON, Ms. JACKSON-LEE of Texas, Mr. RAHALL, Mrs. CARSON, Mrs. MALONEY of New York, Mr. MASCARA, Mr. FLAKE, Mr. GONZALEZ, Mrs. CLAYTON, Mr. LANTOS, Ms. PELOSI, and Mr. DAN SCHAEFER of Colorado) introduced the following bill; which was referred to the Committee on Transportation and Infrastructure

A BILL

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft.

[Italic->] Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, [<-Italic]

SECTION 1. CHILD RESTRAINT SYSTEMS ON COMMERCIAL AIRCRAFT.

(a) IN GENERAL- Chapter 447 of title 49, United States Code, is amended by adding at the end the following new section:

`Sec. 44725. Child restraint systems

`Not later than 90 days after the date of the enactment of this section, the Secretary shall issue regulations requiring the use of child safety restraint systems approved by the Secretary on any aircraft operated by an air carrier in providing interstate air transportation, intrastate transportation, or overseas air transportation. Such regulations shall establish age or weight limits for children who are to use such systems.'.

(b) CLERICAL AMENDMENT- The table of sections at the beginning of such chapter is amended by adding at the end the following new item:

`44725. Child restraint systems.'.

SEC. 2. INTERNATIONAL STANDARD.

It is the sense of Congress that the United States representative to the International Civil Aviation Organization should seek an international standard to require that passengers on a civil aviation aircraft be restrained on takeoff and landing and when directed by the captain of such aircraft.

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HR 1141 IH
105th CONGRESS
1st Session

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft and to restrict the fares charged by air carriers for air transportation provided to children under 3 years of age.

IN THE HOUSE OF REPRESENTATIVES

March 20, 1997

Mr. DEFAZIO introduced the following bill; which was referred to the Committee on Transportation and Infrastructure

A BILL

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft and to restrict the fares charged by air carriers for air transportation provided to children under 3 years of age.

[Italic->] Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, [<-Italic]

SECTION 1. CHILD RESTRAINT SYSTEMS ON COMMERCIAL AIRCRAFT.

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(b) CLERICAL AMENDMENT- The table of sections at the beginning of such chapter is amended by adding at the end the following new item:

`44725. Child restraint systems.'.

SEC 2. AIR TRANSPORTATION PRICES FOR CHILDREN UNDER 3 YEARS OF AGE.

(a) MAXIMUM PRICE-

(1) IN GENERAL- Chapter 415 of title 49, United States Code, is amended by adding at the end the following new section:

`Sec. 41512. Air transportation prices for children under 3 years of age

`(a) IN GENERAL- An air carrier providing air transportation to a child under 3 years of age on a scheduled flight to any final destination may not charge a price for such air transportation that exceeds the lowest price charged by the air carrier for such air transportation to any other paying passenger on such flight with the same final destination.

`(b) DEFINITIONS- In this section, the following definitions apply:

`(1) AIR CARRIER- The term `air carrier' includes foreign air carriers.

`(2) AIR TRANSPORTATION- The term `air transportation' includes intrastate air transportation.'.

(2) CLERICAL AMENDMENT- The table of sections at the beginning of such chapter is amended by adding at the end the following new item:

`41512. Air transportation prices for children under 3 years of age.'.

(b) SENSE OF CONGRESS- It is the sense of Congress that air carriers should provide air transportation to children under 3 years of age at no charge.

FILE s398.is

S 398 IS

105th CONGRESS

1st Session

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft, and for other purposes.

IN THE SENATE OF THE UNITED STATES

March 5, 1997

Mrs. MURRAY introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

A BILL

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft, and for other purposes.

[Italic->] Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, [<-Italic]

SECTION 1. CHILD SAFETY RESTRAINT SYSTEMS ON COMMERCIAL AIRCRAFT.

(a) IN GENERAL- Chapter 447 of title 49, United States Code, is amended by adding at the end the following new section:

`Sec. 44725. Child safety restraint systems

`(a) IN GENERAL- Not later than 90 days after the date of enactment of this section, the Secretary of Transportation shall issue regulations requiring the use of child safety restraint systems that have been approved by the Secretary on any aircraft operated by an air carrier in providing interstate air transportation, intrastate air transportation, or foreign air transportation.

`(b) AGE OR WEIGHT LIMITS- The regulations issued under this section shall establish age or weight limits for children who use the child safety restraint systems.'.

(b) CLERICAL AMENDMENT- The chapter analysis for chapter 447 of title 49, United States Code, is amended by adding at the end the following new item:

`44725. Child safety restraint systems.'.

SEC. 2. INTERNATIONAL STANDARD.

It is the sense of Congress that the United States representative to the International Civil Aviation Organization should seek an international standard to require that passengers on a civil aviation aircraft be restrained--

(1) on takeoff and landing; and

(2) when directed by the captain of such aircraft.

Airplanes / kids

MEMORANDUM

TO: TOM FREEDMAN, MARY L. SMITH

FROM: DREW HANSEN

RE: CHILD SAFETY IN COMMERCIAL AIRPLANES

DATE: JULY 12, 1997

SUMMARY

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PROBLEM

Children under two years of age have long been permitted to sit in their parent's laps during air travel. An estimated 10,000 children per day travel in this manner. But safety experts say that an unrestrained child traveling in an adult's lap runs a much higher risk of injury or death in case of air turbulence or a plane crash than a child secured by a separate child restraint system (CRS) on an adjacent seat. From 1978-1994, five children under two died in plane accidents who would have lived had they been in child seats. During the same period, ten injuries to children under two might have been prevented by the use of child seats.

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POSSIBLE DIFFICULTIES WITH MANDATORY CRS LEGISLATION

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empty seats next to parents with young children until the plane was absolutely full.[2]

Finally, a DOT-FAA study conducted pursuant to section 522 of the Federal Aviation Authorization Act of 1994 confirmed the results of earlier studies. The DOT-FAA study found that a CRS mandate could prevent an estimated five infant fatalities over ten years. But the additional cost over ten years, assuming that the family pays full fare for every family seat, would be about $200 to each family, per family trip, leading to an additional cost to families of $109 million per year. In such a situation, 27% of families would still travel by air, 53% would not travel at all, and 20% would choose other modes of transportation. The shift to other modes of transportation would cause 82 more deaths among children and adults over ten years. Even if airlines responded to a mandatory CRS rule by lowering fares for infants or by some other marketing strategy, some travel diversion would still occur. The DOT-FAA study found that if carriers charged only 25% of the full fare, some families would still choose other forms of transportation, leading to a net increase of 17 child and adult deaths over ten years.

Instead of requiring CRS use, therefore, the FAA has embarked on a public education campaign strongly encouraging their use. In addition, Secretary Peña has asked carriers to establish incentives for parents to purchase seats for infants. Southwest Airlines, for instance, offers a discounted fare for children under two years of age.

But the results of these studies have been challenged by other organizations. The National Transportation Safety Board (NTSB), a longtime advocate of mandatory CRS legislation, has charged that the FAA studies are "based upon incomplete analysis."[3] The central contention of the NTSB is that airlines will not risk the revenue loss caused by entire families diverting to other forms of transportation, and will respond with innovations such as free seats for infants, group discounts, or special fares for traveling at off-peak times. In testimony before the U.S. House of Representatives on July 20, 1990, the Vice President of Operations for the Air Transport Association said that airlines would offer a special fare arrangement for families with infants "rather than risk the loss of one or more adult fares or perhaps an entire family unit." Even the DOT-FAA study concluded that there would be no net increase in infant fatalities if airlines charged 20% of the full fare, although travel diversion in this scenario would still lead to an additional 12.8 non-infant fatalities over ten years. Of course, if airlines chose not to charge to provide separate seats for infants in CRS's, there would be no net increase in deaths or injuries.

In response to the FAA studies, the Association of Flight Attendants (AFA) commissioned a study by Darryl Jenkins, a visiting scholar at the International Institute of Tourism Research at George Washington University, to re-examine the economic arguments on requiring CRS use.

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[2]According to a July 3, 1997 article in the *New York Times,* many airlines will often reserve the seat next to a parent who does not buy a ticket for an infant. But these seats are not guaranteed on heavily booked flights.

[3]Testimony of Barry Sweedler, Director of the Office of Safety Recommendations, National Transportation Safety Board, before the Subcommittee on Aviation of the House Committee on Transportation and Infrastructure, August 1, 1996, p. 2.

The AFA study contended that the FAA studies were based on incorrect modeling assumptions. According to the AFA study, the FAA studies did not have key data to determine price sensitivity, used an industry demand curve that unrealistically simplified a complex situation, did not take into account the price competition generated by low-fare carriers, and did not take into account the effects of income sensitivity. Basically, the contentions of the AFA study are 1.) that the airline industry is increasingly dominated by low-cost carriers, especially on frequently traveled routes, who are forcing prices down, and 2.) that the FAA studies incorrectly used "price elasticity" (who would choose not to fly if the cost increased) as a surrogate for "cross-elasticity" (who would switch into other modes of transportation, such as automobiles, if the cost of flying increased).

A key to resolving this dispute seems to be whether or not airlines are willing to follow the lead of Southwest Airlines and offer specially discounted fares for children under two years of age. **The cuts in fares for children under two announced in the last two weeks seems to indicate that airlines are willing to cut fares to encourage families to buy a separate seat for their young child.** On July 2, 1997, American Airlines announced that children under two could ride in a separate seat for a fare of only 50% of the fare of the accompanying adult.[4] This policy was quickly adopted by United Airlines, Delta, Northwest, and Continental. Contrary to FAA assumptions, the new pricing policy would not lead to a loss of airline revenue but could even lead to a small net gain. Robert W. Baker, the Vice President of Operations of American airlines, said in the July 3, 1997 *New York Times* that American expected a modest increase in revenue as a result of the new fare.

2. Technical difficulties with CRS use in airplanes.

The second main argument against mandatory CRS legislation is that there are technical difficulties with using existing CRS's in airplanes. **But even with these difficulties, children under two are always safer in an existing CRS than on the lap of an accompanying adult.** The FAA currently recommends that children weighing under 20 pounds be restrained in a certified, rear-facing CRS, that children weighing between 20 and 40 pounds be restrained in a certified, forward-facing CRS, and that children weighing over 40 pounds be strapped in a regular lap belt. Margaret Gilligan, FAA Deputy Associate Administrator for Regulation and Certification, said last year in testimony before the House Subcommittee on Aviation that although the FAA is continuing their research on CRS design to achieve a greater safety margin, "no one contests our finding that children are better off in currently-marketed, approved CRS's [than in the lap of an accompanying adult]."[5]

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[4]Because the FAA studies are based on full-fare data, a 50% discount from the fare of the accompanying adult could approach the FAA's 20% threshold for no net gain in infant fatalities from travel diversion. If the accompanying adult was traveling on a special reduced-price ticket, for instance, a 50% discount on such a fare could be a considerable markdown from the price of a full-fare ticket.

[5]Margaret Gilligan, Testimony before the Subcommittee on Aviation of the House Committee on Transportation and Infrastructure, August 1, 1996, p. 5.

A major study by the Civil Aeromedical Institute (CAMI) in 1994 also found that while current CRS designs were not perfect, they still provided more protection than sitting on the lap of an adult. An infant in a front-facing CRS, although still exposed to serious risks, was found to be safer than if he or she were held by an accompanying adult. The use of a rear-facing CRS, though, was found to be a "definite safety benefit."[6] However, both front- and rear-facing CRS's were found to be often difficult to install and inconvenient to other passengers and staff. A forward-facing CRS is sometimes too big to install in seats with fixed arm rests, and airline lap belts often do not suitably secure the CRS to the seat. In addition, the lap belt does not always protect the child from being thrown out of the CRS and hitting his or her head on the forward row seat. A rear-facing CRS often interferes with passage between seat rows and the recline motion of a forward row seat.

Because of these difficulties, many efforts are currently underway to develop a CRS that would be more suitable for airline use:

- The Society of Automotive Engineers (SAE), an ad-hoc group, is currently trying to develop a standard of compatibility between seats for cars and seats for airplanes.
- The FAA is working on developing new types of restraints for children and better ways to secure a conventional CRS to an airplane seat.
- The FAA is also developing a prototype "platform" for in-seat installation of a forward-facing CRS, which in preliminary tests has significantly increased the effectiveness of forward-facing CRS's.
- Two projects are currently underway, one in the United States and one in Canada, to develop an airplane-specific CRS. Both prototypes have been tested at CAMI in both forward- and rear-facing positions, and both performed much better than any currently available CRS.

In short, the use of any certified CRS provides better protection than being carried on the lap of an accompanying adult, although a rear-facing CRS is generally preferable to a forward-facing one. Advances in technology for an airplane-specific CRS and for better installation of conventional CRS devices should lead to even greater safety benefits for young children.

CONCLUSION

The recent fare cuts by U.S. airlines for children under two years old, the proven safety record of existing CRS's in airplanes, and the ongoing development of better CRS's seem to remove many of the problems with mandatory CRS legislation. H.R. 754 and 1141 and S. 398 would follow the recommendations of the NTSB, the Gore Commission, and many other organizations by requiring children under two years of age to be restrained in a CRS in a separate seat, potentially preventing several fatalities and deaths among infants in the next ten years.

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[6]Civil Aeromedical Institute, "The Performance of Child Restraint Devices in Transport Airplane Passenger Seats," OAM Report AM-94-19, September, 1994, p. 22.

FILE h754.ih

HR 754 IH

105th CONGRESS

1st Session

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft.

IN THE HOUSE OF REPRESENTATIVES

February 13, 1997

Mr. DEFAZIO (for himself, Mr. SHAYS, Mr. CONYERS, Mr. HINCHEY, Mr. FILNER, Mrs. MORELLA, Mr. ABERCROMBIE, Mr. NADLER, Mr. EVANS, Mr. HORN, Ms. WOOLSEY, Mr. BLAGOJEVICH, Ms. NORTON, Ms. JACKSON-LEE of Texas, Mr. RAHALL, Mrs. CARSON, Mrs. MALONEY of New York, Mr. MASCARA, Mr. FLAKE, Mr. GONZALEZ, Mrs. CLAYTON, Mr. LANTOS, Ms. PELOSI, and Mr. DAN SCHAEFER of Colorado) introduced the following bill; which was referred to the Committee on Transportation and Infrastructure

A BILL

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft.

[Italic->] Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, [<-Italic]

SECTION 1. CHILD RESTRAINT SYSTEMS ON COMMERCIAL AIRCRAFT.

(a) IN GENERAL- Chapter 447 of title 49, United States Code, is amended by adding at the end the following new section:

`Sec. 44725. Child restraint systems

`Not later than 90 days after the date of the enactment of this section, the Secretary shall issue regulations requiring the use of child safety restraint systems approved by the Secretary on any aircraft operated by an air carrier in providing interstate air transportation, intrastate transportation, or overseas air transportation. Such regulations shall establish age or weight limits for children who are to use such systems.'.

(b) CLERICAL AMENDMENT- The table of sections at the beginning of such chapter is amended by adding at the end the following new item:

`44725. Child restraint systems.'.

SEC. 2. INTERNATIONAL STANDARD.

It is the sense of Congress that the United States representative to the International Civil Aviation Organization should seek an international standard to require that passengers on a civil aviation aircraft be restrained on takeoff and landing and when directed by the captain of such aircraft.

FILE h1141.ih

HR 1141 IH
105th CONGRESS
1st Session

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft and to restrict the fares charged by air carriers for air transportation provided to children under 3 years of age.

IN THE HOUSE OF REPRESENTATIVES

March 20, 1997

Mr. DEFAZIO introduced the following bill; which was referred to the Committee on Transportation and Infrastructure

A BILL

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft and to restrict the fares charged by air carriers for air transportation provided to children under 3 years of age.

[Italic->] Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, [<-Italic]

SECTION 1. CHILD RESTRAINT SYSTEMS ON COMMERCIAL AIRCRAFT.

(a) IN GENERAL- Chapter 447 of title 49, United States Code, is amended by adding at the end the following new section:

`Sec. 44725. Child restraint systems

`Not later than 90 days after the date of the enactment of this section, the Secretary shall issue regulations requiring the use of child safety restraint systems approved by the Secretary on any aircraft operated by an air carrier in providing interstate air transportation, intrastate transportation, or overseas air transportation. Such regulations shall establish age or weight limits for children who are to use such systems.'.

(b) CLERICAL AMENDMENT- The table of sections at the beginning of such chapter is amended by adding at the end the following new item:

`44725. Child restraint systems.'.

SEC 2. AIR TRANSPORTATION PRICES FOR CHILDREN UNDER 3 YEARS OF AGE.

(a) MAXIMUM PRICE-

(1) IN GENERAL- Chapter 415 of title 49, United States Code, is amended by adding at the end the following new section:

`Sec. 41512. Air transportation prices for children under 3 years of age

`(a) IN GENERAL- An air carrier providing air transportation to a child under 3 years of age on a scheduled flight to any final destination may not charge a price for such air transportation that exceeds the lowest price charged by the air carrier for such air transportation to any other paying passenger on such flight with the same final destination.

`(b) DEFINITIONS- In this section, the following definitions apply:

`(1) AIR CARRIER- The term `air carrier' includes foreign air carriers.

`(2) AIR TRANSPORTATION- The term `air transportation' includes intrastate air transportation.'.

(2) CLERICAL AMENDMENT- The table of sections at the beginning of such chapter is amended by adding at the end the following new item:

`41512. Air transportation prices for children under 3 years of age.'.

(b) SENSE OF CONGRESS- It is the sense of Congress that air carriers should provide air transportation to children under 3 years of age at no charge.

FILE s398.is

S 398 IS

105th CONGRESS

1st Session

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft, and for other purposes.

IN THE SENATE OF THE UNITED STATES

March 5, 1997

Mrs. MURRAY introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

A BILL

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft, and for other purposes.

[Italic->] Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, [<-Italic]

SECTION 1. CHILD SAFETY RESTRAINT SYSTEMS ON COMMERCIAL AIRCRAFT.

(a) IN GENERAL- Chapter 447 of title 49, United States Code, is amended by adding at the end the following new section:

`Sec. 44725. Child safety restraint systems

`(a) IN GENERAL- Not later than 90 days after the date of enactment of this section, the Secretary of Transportation shall issue regulations requiring the use of child safety restraint systems that have been approved by the Secretary on any aircraft operated by an air carrier in providing interstate air transportation, intrastate air transportation, or foreign air transportation.

`(b) AGE OR WEIGHT LIMITS- The regulations issued under this section shall establish age or weight limits for children who use the child safety restraint systems.'.

(b) CLERICAL AMENDMENT- The chapter analysis for chapter 447 of title 49, United States Code, is amended by adding at the end the following new item:

`44725. Child safety restraint systems.'.

SEC. 2. INTERNATIONAL STANDARD.

It is the sense of Congress that the United States representative to the International Civil Aviation Organization should seek an international standard to require that passengers on a civil aviation aircraft be restrained--

(1) on takeoff and landing; and

(2) when directed by the captain of such aircraft.

NEWS
FROM REPRESENTATIVE
PETER DeFAZIO
4th Congressional District, Oregon
Contact: Jeff Stier 202-225-6416

WASHINGTON DC OFFICE
2134 Rayburn House Office Building
Washington, DC 20515
(202) 225-6416

EUGENE OFFICE
151 West 7th Ave, Suite 400
Eugene, OR 97401
(541) 465-6732

COOS BAY OFFICE
P.O. Box 1557
Coos Bay, OR 97420
(541) 269-2600

ROSEBURG OFFICE
812 SE Jackson St, Suite B
PO Box 2460
Roseburg, OR 97470
(541) 440-3535

March 5, 1997
FOR IMMEDIATE RELEASE

LAWMAKERS INTRODUCE AIRLINE CHILD SAFETY BILL

WASHINGTON, D.C.--Reps. Peter DeFazio (D-Ore.), Chris Shays (R-Conn.), and Senator Patty Murray (D-Wash.) today announced introduction of legislation to require child safety seats for infants flying on commercial airlines in the U.S. Currently, all passengers over age two must have their own seats. However, restraints are not required for children under age two.

DeFazio, a long-time aviation safety advocate and senior member of the House Aviation Subcommittee, was joined at a press conference to announce the legislation by Rep. Chris Shays (R-Conn.), Senator Patty Murray (D-Wash.), Patricia Friend, International President of the Association of Flight Attendants and David and Kathleen Tourtellotte, parents of a child who was saved by a safety seat in a fatal accident last July.

DeFazio and Shays have already introduced the child safety legislation in the House, H.R. 754. Murray was expected to introduce the measure in the Senate today.

"Adults are required to wear seatbelts, luggage must be stowed, and even coffee pots must be restrained during take-of, landing and turbulence. Our infants should be afforded the same level of safety," DeFazio said.

Vice-President Gore's Commission on Aviation Safety and Security recommended mandated child safety restraints in its report to President Clinton. The National Transportation Safety Board, the Airline Pilots Association and the Association of Flight Attendants all strongly support the required use of child safety restraint systems on commercial aircraft.

In December of last year, the FAA launched a public education campaign to encourage parents to secure their children in child safety seats during flight. As part of the campaign, the FAA has produced public service announcements strongly recommending that "all children who fly, regardless of age, use the appropriate restraint..." In addition, the FAA's publications state, "if there's unexpected turbulence during a flight, a child safety seat is the safest and most secure place for your little one."

Yet, the FAA refuses to mandate child safety seats for children under two, citing a commissioned study which concluded that mandating child restraints on air carrier flights would result in a net increase in fatalities because passengers would instead choose to travel by car. DeFazio criticized the study noting that the National Transportation Safety Board had reviewed the study and found it based on incomplete analysis and faulty assumptions.

"Unfortunately, we need more than earnest admonitions from the FAA," DeFazio said. "We need a federal standard that protects the lives of infant children travelling on the nation's commercial airlines. That's what we're offering here today."

The Tourtellotte family, who appeared at today's press conference, recounted their experience when their daughter Emma was saved from flying shrapnel by a child safety seat when the engine of Delta Flight 1288 exploded in Atlanta. Two people, sitting in front of the Tourtellottes were killed.

-30-

HIMA -

YOU HAVE A FAX
IN 224 - BEN

MEMORANDUM

TO: **BRUCE REED**
ELENA KAGAN

FROM: **TOM FREEDMAN**
MARY L. SMITH
DREW HANSEN

RE: **CHILD SAFETY IN COMMERCIAL AIRPLANES**

DATE: **JULY 18, 1997**

SUMMARY

An estimated 10,000 children each day fly as "lap children," held in the laps of an accompanying adult instead of being secured in a separate seat by a certified Child Restraint System (CRS). These children are exposed to serious risk of injury or death in case of an accident or turbulence. Current FAA policy is to "strongly encourage," but not mandate, the use of a CRS for children under two years of age. The FAA has opposed a CRS mandate because of fears that the increased cost of buying an extra seat would lead many families to drive, leading to a net increase in injury and death, and because there are some technical problems with adapting existing CRS's to airplane use. Legislation pending in the House (H.R. 754 and 1141) and Senate (S. 398) would require the use of CRS's for children under two years of age.

PROBLEM

Children under two years of age have long been permitted to sit in their parent's laps during air travel. An estimated 10,000 children per day travel in this manner. But safety experts say that an unrestrained child traveling in an adult's lap runs a much higher risk of injury or death in case of air turbulence or a plane crash than a child secured by a separate child restraint system (CRS) on an adjacent seat. From 1978-1994, five children under two died in plane accidents who would have lived had they been in child seats. During the same period, ten injuries to children under two might have been prevented by the use of child seats.

Several recent incidents involving "lap children" have brought the matter to the public's attention. On July 19, 1989, United Airlines Flight 232 crashed in Sioux City, Iowa. Of the four unrestrained children on that flight, one was found in an overhead bin 15 rows behind the original seat, and one died from smoke inhalation in the ensuing fire. On July 12, 1994, a DC-9 flown by US Air crashed in Charlotte, North Carolina. There were 37 fatal injuries on the flight, including a 9-month-old unrestrained child who was hurled three rows from her mother's arms and died of massive head injuries. Air turbulence also poses serious risks to the unrestrained child. On a flight in June of 1995, an unrestrained child flew through the air during a patch of turbulence, but was caught by a fellow passenger. In 1990, a DC-10 encountered turbulence near Puerto Rico.

The only injury on the flight was sustained by an unrestrained infant, who suffered a fractured skull.

The use of child restraint systems has prevented injury or death in several other airline accidents. On July 6, 1996, the engine of Delta Flight 1288 exploded on the runway in Pensacola, Florida. Several passengers were killed instantly, but a 15-month-old suffered only a scratch on her neck because her parents had strapped her into a CRS in a separate seat. On September 6, 1992, a Piper PA-30 crashed at Broussard, Louisiana. Parts of both wings and both horizontal stabilizers were torn off before impact. A four-year-old boy and ten-month-old girl who sat in child restraint systems in the rear bench seat suffered serious injuries, but survived. Their father was killed.

PROPOSED SOLUTION

Many organizations, including the National Transportation Safety Board (NTSB), the Aviation Consumer Action Project, and the Association of Flight Attendants (AFA), have supported legislation that would mandate the use of child restraint systems on commercial aircraft. On February 12, 1997, the White House Commission on Aviation Safety and Security Bills, headed by Vice President Gore, recommended that "all infants and small children below the weight of 40 pounds and under the height of 40 inches be restrained in an appropriate child restraint system, such as child safety seats, appropriate to their height and weight." Bills to this effect were introduced in the 104th Congress by Rep. Lightfoot (R-IA, H.R. 1309) and in the 105th Congress by Rep. DeFazio (D-OR, H.R. 754 and 1141) and Sen. Murray (D-WA, S. 398). Copies of H.R. 754 and 1141 and S. 398 are attached.[1]

POSSIBLE DIFFICULTIES WITH MANDATORY CRS LEGISLATION

1. Increased injury and death from travel diversion.

The FAA has refused to issue regulations mandating the use of child restraint systems because of fears that the increased cost to families of purchasing an extra seat would cause more of them to drive to their destination, leading to a net increase in injuries and fatalities.

A study by Apogee Research in 1990 found that the average cost of a trip to each family under mandatory CRS legislation would be $185, leading to a total additional expenditure of $252 million per year on airfare. Faced with this situation, Apogee predicted that 17% of families would forgo travel entirely or divert to another mode of travel, leading to a net increase of 1.6 fatalities, 4.8 serious injuries, and 218 minor injuries per year. The conclusions of this study were supported in broad outline by later studies by Windle and Dresner of the University of Maryland (1990) and in a briefing paper by McKenzie and Lee that was published by the Cato Institute (1990). Apogee conducted a second study for the FAA in 1993 coming to essentially the same conclusions. In the second study, however, Apogee contended that 95% of the safety gains of

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[1]H.R. 754 and S. 398 are almost identical; H.R. 1141 adds the provision that airlines would be prohibited from charging a price for the required additional seat that exceeds the lowest price charged by the carrier to any other paying passenger on the same flight.

mandatory CRS legislation could be realized at low additional cost by requiring airlines to reserve empty seats next to parents with young children until the plane was absolutely full.[2]

Finally, a DOT-FAA study conducted pursuant to section 522 of the Federal Aviation Authorization Act of 1994 confirmed the results of earlier studies. The DOT-FAA study found that a CRS mandate could prevent an estimated five infant fatalities over ten years. But the additional cost over ten years, assuming that the family pays full fare for every family seat, would be about $200 to each family, per family trip, leading to an additional cost to families of $109 million per year. In such a situation, 27% of families would still travel by air, 53% would not travel at all, and 20% would choose other modes of transportation. The shift to other modes of transportation would cause 82 more deaths among children and adults over ten years. Even if airlines responded to a mandatory CRS rule by lowering fares for infants or by some other marketing strategy, some travel diversion would still occur. The DOT-FAA study found that if carriers charged only 25% of the full fare, some families would still choose other forms of transportation, leading to a net increase of 17 child and adult deaths over ten years.

Instead of requiring CRS use, therefore, the FAA has embarked on a public education campaign strongly encouraging their use. In addition, Secretary Peña has asked carriers to establish incentives for parents to purchase seats for infants. Southwest Airlines, for instance, offers a discounted fare for children under two years of age.

But the results of these studies have been challenged by other organizations. The National Transportation Safety Board (NTSB), a longtime advocate of mandatory CRS legislation, has charged that the FAA studies are "based upon incomplete analysis."[3] The central contention of the NTSB is that airlines will not risk the revenue loss caused by entire families diverting to other forms of transportation, and will respond with innovations such as free seats for infants, group discounts, or special fares for traveling at off-peak times. In testimony before the U.S. House of Representatives on July 20, 1990, the Vice President of Operations for the Air Transport Association said that airlines would offer a special fare arrangement for families with infants "rather than risk the loss of one or more adult fares or perhaps an entire family unit." Even the DOT-FAA study concluded that there would be no net increase in infant fatalities if airlines charged 20% of the full fare, although travel diversion in this scenario would still lead to an additional 12.8 non-infant fatalities over ten years. Of course, if airlines chose not to charge to provide separate seats for infants in CRS's, there would be no net increase in deaths or injuries.

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George Washington University, to re-examine the economic arguments on requiring CRS use. The AFA study contended that the FAA studies were based on incorrect modeling assumptions. According to the AFA study, the FAA studies did not have key data to determine price sensitivity, used an industry demand curve that unrealistically simplified a complex situation, did not take into account the price competition generated by low-fare carriers, and did not take into account the effects of income sensitivity. Basically, the contentions of the AFA study are 1.) that the airline industry is increasingly dominated by low-cost carriers, especially on frequently traveled routes, who are forcing prices down, and 2.) that the FAA studies incorrectly used "price elasticity" (who would choose not to fly if the cost increased) as a surrogate for "cross-elasticity" (who would switch into other modes of transportation, such as automobiles, if the cost of flying increased).

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In short, the use of any certified CRS provides better protection than being carried on the lap of an accompanying adult, although a rear-facing CRS is generally preferable to a forward-facing one. Advances in technology for an airplane-specific CRS and for better installation of conventional CRS devices should lead to even greater safety benefits for young children.

CONCLUSION

The recent fare cuts by U.S. airlines for children under two years old, the proven safety record of existing CRS's in airplanes, and the ongoing development of better CRS's seem to remove many of the problems with mandatory CRS legislation. H.R. 754 and 1141 and S. 398 would follow the recommendations of the NTSB, the Gore Commission, and many other organizations by requiring children under two years of age to be restrained in a CRS in a separate seat, potentially preventing several injuries and fatalities among infants in the next ten years.

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HR 754 IH
105th CONGRESS
1st Session

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft.

IN THE HOUSE OF REPRESENTATIVES

February 13, 1997

Mr. DEFAZIO (for himself, Mr. SHAYS, Mr. CONYERS, Mr. HINCHEY, Mr. FILNER, Mrs. MORELLA, Mr. ABERCROMBIE, Mr. NADLER, Mr. EVANS, Mr. HORN, Ms. WOOLSEY, Mr. BLAGOJEVICH, Ms. NORTON, Ms. JACKSON-LEE of Texas, Mr. RAHALL, Mrs. CARSON, Mrs. MALONEY of New York, Mr. MASCARA, Mr. FLAKE, Mr. GONZALEZ, Mrs. CLAYTON, Mr. LANTOS, Ms. PELOSI, and Mr. DAN SCHAEFER of Colorado) introduced the following bill; which was referred to the Committee on Transportation and Infrastructure

A BILL

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft.

[Italic->] Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, [<-Italic]

SECTION 1. CHILD RESTRAINT SYSTEMS ON COMMERCIAL AIRCRAFT.

(a) IN GENERAL- Chapter 447 of title 49, United States Code, is amended by adding at the end the following new section:

`Sec. 44725. Child restraint systems

`Not later than 90 days after the date of the enactment of this section, the Secretary shall issue regulations requiring the use of child safety restraint systems approved by the Secretary on any aircraft operated by an air carrier in providing interstate air transportation, intrastate transportation, or overseas air transportation. Such regulations shall establish age or weight limits for children who are to use such systems.'.

(b) CLERICAL AMENDMENT- The table of sections at the beginning of such chapter is amended by adding at the end the following new item:

`44725. Child restraint systems.'.

SEC. 2. INTERNATIONAL STANDARD.

It is the sense of Congress that the United States representative to the International Civil Aviation Organization should seek an international standard to require that passengers on a civil aviation aircraft be restrained on takeoff and landing and when directed by the captain of such aircraft.

FILE h1141.ih

HR 1141 IH
105th CONGRESS
1st Session

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft and to restrict the fares charged by air carriers for air transportation provided to children under 3 years of age.

IN THE HOUSE OF REPRESENTATIVES

March 20, 1997

Mr. DEFAZIO introduced the following bill; which was referred to the Committee on Transportation and Infrastructure

A BILL

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft and to restrict the fares charged by air carriers for air transportation provided to children under 3 years of age.

[Italic->] Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, [<-Italic]

SECTION 1. CHILD RESTRAINT SYSTEMS ON COMMERCIAL AIRCRAFT.

(a) IN GENERAL- Chapter 447 of title 49, United States Code, is amended by adding at the end the following new section:

`Sec. 44725. Child restraint systems

`Not later than 90 days after the date of the enactment of this section, the Secretary shall issue regulations requiring the use of child safety restraint systems approved by the Secretary on any aircraft operated by an air carrier in providing interstate air transportation, intrastate transportation, or overseas air transportation. Such regulations shall establish age or weight limits for children who are to use such systems.'.

(b) CLERICAL AMENDMENT- The table of sections at the beginning of such chapter is amended by adding at the end the following new item:

`44725. Child restraint systems.'.

SEC 2. AIR TRANSPORTATION PRICES FOR CHILDREN UNDER 3 YEARS OF AGE.

(a) MAXIMUM PRICE-

(1) IN GENERAL- Chapter 415 of title 49, United States Code, is amended by adding at the end the following new section:

`Sec. 41512. Air transportation prices for children under 3 years of age

`(a) IN GENERAL- An air carrier providing air transportation to a child under 3 years of age on a scheduled flight to any final destination may not charge a price for such air transportation that exceeds the lowest price charged by the air carrier for such air transportation to any other paying passenger on such flight with the same final destination.

`(b) DEFINITIONS- In this section, the following definitions apply:

`(1) AIR CARRIER- The term `air carrier' includes foreign air carriers.

`(2) AIR TRANSPORTATION- The term `air transportation' includes intrastate air transportation.'.

(2) CLERICAL AMENDMENT- The table of sections at the beginning of such chapter is amended by adding at the end the following new item:

`41512. Air transportation prices for children under 3 years of age.'.

(b) SENSE OF CONGRESS- It is the sense of Congress that air carriers should provide air transportation to children under 3 years of age at no charge.

ftp://ftp.loc.gov/pub/thomas/c105/s398.is.txt

FILE s398.is

S 398 IS
105th CONGRESS
1st Session
To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft, and for other purposes.

IN THE SENATE OF THE UNITED STATES

March 5, 1997

Mrs. MURRAY introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

A BILL

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft, and for other purposes.

[Italic->] Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, [<-Italic]

SECTION 1. CHILD SAFETY RESTRAINT SYSTEMS ON COMMERCIAL AIRCRAFT.

(a) IN GENERAL- Chapter 447 of title 49, United States Code, is amended by adding at the end the following new section:

`Sec. 44725. Child safety restraint systems

`(a) IN GENERAL- Not later than 90 days after the date of enactment of this section, the Secretary of Transportation shall issue regulations requiring the use of child safety restraint systems that have been approved by the Secretary on any aircraft operated by an air carrier in providing interstate air transportation, intrastate air transportation, or foreign air transportation.

`(b) AGE OR WEIGHT LIMITS- The regulations issued under this section shall establish age or weight limits for children who use the child safety restraint systems.'.

(b) CLERICAL AMENDMENT- The chapter analysis for chapter 447 of title 49, United States Code, is amended by adding at the end the following new item:

`44725. Child safety restraint systems.'.

SEC. 2. INTERNATIONAL STANDARD.

It is the sense of Congress that the United States representative to the International Civil Aviation Organization should seek an international standard to require that passengers on a civil aviation aircraft be restrained--

(1) on takeoff and landing; and

(2) when directed by the captain of such aircraft.

factors. I won't argue whether or not the study is a good one or a bad one. But let me just pose to you, Mr. Sweedler, a question.

Assuming there is no diversion, all five million enplanements continue, nobody goes to cars, it's going to cost the traveling public somewhere between $100 million and $1 billion, assuming we have to make some assumptions on when airlines are going to give them discount fares or let them fly free if it's off-peak, or whatever, but it's going to be a significant dollar amount to the traveling public. I think that's a given. So somewhere between $100 million and $1 billion, assuming there are occasions when people pay a fare.

If you had a magic wand and could apply that half a billion dollars to your top-priority safety concerns, would this be how you spent the money, or might you consider spending it on detectors that would identify chemical explosives, or whatever? And that's what our committee has to decide.

We are going to reallocate how the traveling public's money is spent. Would we save more children's lives with chemical weapons detectors that kept plastic explosives from going on an airplane with that $500 million, or would we save more children's lives by mandating that that $500 million be spent on child safety seats?

Mr. SWEEDLER. That's a tough question, sir. First of all, we're not quite sure how much the cost would be to families and how the airlines would respond if there was a requirement. The cost might not be as high as some of the estimates.

Some of the other things to consider is that what we're actually asking for is just one extra step from what the FAA is actually doing.

The FAA certainly agrees with us, as does everyone else, that the children need to be restrained, and they are energetically going out and pushing this through educational programs.

So what we're saying, we think there shouldn't be an option for safety. What they think is the best thing for children and are advocating that, we think should be the requirement for all children.

Mr. GEREN. I understand that, but say five million enplanements. Say it only costs $20. That's $100 million. If you were given in NTSB $100 million to spend on safety priorities, where would you apply it?

Mr. SWEEDLER. It's the money that the passengers would be paying, to a great extent.

Mr. GEREN. Absolutely. And——

Mr. SWEEDLER. You heard the testimony of the parents. They had to make a decision, and they were willing to spend $200. If it was only $20, I'm sure there wouldn't be that much debate.

Mr. GEREN. I'm sure the parents also would like to have detectors that spotted plastic explosives, and they also—there are a lot of things. I'm just asking you, as the NTSB, when you all identify your safety priorities, if we gave you $100 million and you were entrusted with saving lives, where would you apply it, top priority?

Mr. SWEEDLER. As I said, that's probably a very tough question to answer. We have quite a few issues that need addressing. There is a long list of safety issues that need addressing, and I think it's probably best for us to try to lay out what the issues are and try not to prioritize which safety issue is more important than other safety issues.

There are certain safety issues, like students on school buses, that are so emotional, even though the accident rates are extremely low, parents and people in the communities just demand whatever needs to be done to protect children is done, even though that accident rates are minuscule compared to other areas, and this seems to be one of those areas where it just seems to make common sense to go ahead and take that extra step.

Mr. GEREN. I appreciate that, and we're politicians, so we probably appreciate that as much as anybody—probably more than anybody—and sometimes Government does not act rationally, but we are charged with apportioning how the traveling public's dollars are going to be spent, and if we are going to spend the money in a way that is going to save the most lives, bearing in mind there are political considerations and there are emotions and nobody on this—as Ms. Maillett said earlier, there is not a calloused person in this room. Everybody in this room wants to save children's lives. Will you save more children's lives by spending that $100 million to $500 million on chemical weapons detectors, or will you save more children's lives by spending that $500 million on safety seats?

I think that's a question we have to ask. We all want to save the most number of children's lives with the limited resources we have, and so I just pose that to the panel.

Thank you, Mr. Chairman.

Mr. DUNCAN. Thank you very much, Mr. Geren, once again, for some very good points and questions.

All right. Thank you, ladies and gentleman, for this very helpful testimony.

We'll call up next panel number two. Panel two consists of: John M. Meenan, who is vice president of policy and planning for the Air Transport Association; Patricia A. Friend, who is the international president of the Association of Flight Attendants, AFL–CIO; Jan Brown-Lohr, who is a flight attendant for United Airlines and also represents the Association of Flight Attendants; and Mr. Thomas Bennington, who is president of CRS–A Corporation.

Thank you very much for being with us. I'll do like I did on the last panel, and we'll have the witnesses testify in the order in which they are listed on the agenda of the hearing, and that means, Mr. Meenan, that you will go first.

TESTIMONY OF JOHN MEENAN, VICE PRESIDENT, POLICY AND PLANNING, AIR TRANSPORT ASSOCIATION OF AMERICA; PATRICIA A. FRIEND, INTERNATIONAL PRESIDENT, ASSOCIATION OF FLIGHT ATTENDANTS, AFL–CIO; JAN BROWN-LOHR, FLIGHT ATTENDANT, UNITED AIRLINES, AND MEMBER, ASSOCIATION OF FLIGHT ATTENDANTS, AFL–CIO; AND THOMAS BENNINGTON, PRESIDENT, CRS–A CORPORATION

Mr. MEENAN. Thank you, Mr. Chairman, members of the committee. My name is John Meenan, and I'm vice president for policy and planning for the Air Transport Association of America.

Let me begin by again thanking the committee for holding today's hearing on the subject of use of infant seats aboard aircraft. This is an issue of vital interest to all of us, particularly those of us in the airline busin . We all want everyone aboard our aircraft

to fly safely, but we share a particular concern with the safety of our smallest and youngest passengers.

Candidly, we are frustrated at this point with the lack of resolution by the regulatory authorities of what has become a circular debate over how to best ensure that infants and small children are appropriately belted in during take-off, taxi, landing of an aircraft.

Let me explain briefly.

During the 1980s, the airlines began to raise concerns over the safety implications of Federal Air Regulation 121.311, which, is the regulation that allows lap-held children under the age of two. Those concerns culminated in February 1990 with an ATA Petition to the FAA which would have required that all passengers, including those under the age of two, be appropriately restrained.

Subsequently, the FAA performed the well-known risk/risk analysis of the proposal and concluded that such a regulation could well result in an increase in infant deaths due to diversion of travelers to other less-safe modes, including the highway mode.

Although understandably controversial, it must be said that this type of systematic analysis of any regulatory action bears careful thought and attention if we are to avoid doing inadvertent harm. Frankly, the FAA's point is a very valid concern.

Later, while the ATA petition was still pending, additional facts began to emerge concerning the design adequacy of certain child restraint systems currently approved for use aboard aircraft.

In a nutshell, the Civil Aero-Medical Institute, CAMI, raised substantial concerns as to the effectiveness of many forward-facing devices due to variations in the device attachment points on aircraft versus automotive seats.

Almost simultaneously with the release of that information concerning the device effectiveness, the FAA approached the airlines to suggest that the best way to address the overall issue of the use of child restraints was through public education, and they hoped through carrier programs to promote the use of these devices.

While the carriers agree that public education and market-driven solutions are to be preferred to regulation, where possible, the carriers also believe that we need a logical and well-structured approach to these issues.

We told the FAA then, and we continue to believe, that three things must happen before we can move forward:

First, the regulatory authorities must decide on the basis of size and weight which children actually require specialized restraint devices.

Second, we must have design standards for these restraint systems which are effective in all modes of transportation and can be interchangeably used across modes.

Third, we must take the steps necessary to phase in those appropriate devices in a seamless and organized fashion. Only when that occurs will we be in a position to move forward with either an education and promotion campaign to assure the appropriate use of these systems or to pursue some type of mandatory requirement.

At the request of the FAA, we withdrew our petition to require the use of these devices in May of last year. This was done in order to help clear away what were described as complications for the FAA in moving to resolve these issues. As we said at that time:

"We note that this action does not reflect a fundamental change in policy. The airlines remain absolutely committed to the safety of all passengers, including, if not especially, their youngest passengers. We are hopeful, however, that by withdrawing this petition in the context of the FAA's plan to address the key adequacy issue, real and rapid progress will result.

We look forward to working with the FAA, Congress, the flight attendants, and all interested parties in finding the correct solution to this matter." "It is our expectation," we went on, "that once the FAA has addressed the design adequacy issues, appropriate market-driven solutions will emerge to ensure that all traveling infants are appropriately seated and restrained. Obviously, should circumstances warrant, the airlines may opt to resubmit an updated petition."

Unfortunately, to date the design adequacy issues remain unresolved. DOT, FAA headquarters, the FAA technical center, CAMI, NHTSA, and the Society of Automotive Engineers all continue to chase bits and pieces of this problem, without anyone taking charge of finding a real solution.

To our knowledge, no one has mapped a course to really resolve all these matters on the device adequacy issue. Last week we learned, for example, of the new CAMI tests which were just performed on a platform device to be placed under the infant seat. We hope that is a positive sign, but the timing and the test procedures obviously leave many unanswered questions.

In conclusion, Mr. Chairman, I would summarize our position as follows:

We believe that all passengers, including children, should be appropriately restrained.

We believe that the FAA's risk analysis, which raises substantial concerns about broader child safety issues, and the CAMI test results, which question the design integrity of certain devices, must be considered and resolved.

We believe that with the proper resolution of the device adequacy issue, market-driven solutions would likely provide the most effective means to address the FAA's risk analysis issues. At the same time, we recognize the possible role for mandatory action if it is ultimately determined that market forces do not produce optimum results.

Thank you very much for the opportunity to appear here. I would, of course, be happy to respond to questions.

Mr. DUNCAN. Thank you very much, Mr. Meenan.

The next witness will be Ms. Friend.

Ms. FRIEND. Chairman Duncan, Mr. Lipinski, members of the subcommittee, my name is Patricia Friend. I'm the international president of the Association of Flight Attendants, AFL–CIO.

Thank you for this opportunity to testify on the issue of mandating aircraft child restraint seats for children under the age of two.

AFA has long supported appropriate seat restraint devices for all passengers, including infants and small children. We commend Congressman Lightfoot for his tireless fight through the years to assure that children are protected when they fly, and for reintroducing H.R. 1309.

4. ATA notes that six federal entities are involved, in some or another, with the child safety seat design issue. What would ATA suggest by way of organization to get this issue focused and moving?

Answer: It is the view of the Air Transport Association that given the role of the Department of Transportation as the overall organizational authority responsible for all of the governmental organizations involved in this matter, that an individual with competent authority within the Department should be assigned the responsibility to resolve these matters by a date certain with instructions to establish uniform design standards for child restraint devices for use in all modes of transportation.

Statement of the
Air Transport Association of America
Transportation and Infrastructure Committee
Aviation Subcommittee
U.S. House of Representatives
Concerning Use of Child Safety Seats Aboard Aircraft
August 1, 1996

My name is John Meenan and I am the Vice President for Policy and Planning of the Air Transport Association of America. Let me begin by thanking this Committee for holding today's hearing on the subject of the use of infant seats aboard aircraft. This is an issue of vital interest to all of us -- particularly to those of us in the airline industry. We all want everyone to be as safe as possible when they fly -- but we share a particular concern with the safety of our youngest passengers.

Candidly we are frustrated at this point with the lack of resolution by the regulatory authorities of what has become a circular debate over how to best insure that infants and small children are appropriately belted in during the taxi, takeoff and landing of an aircraft. Let me explain briefly:

- During the 1980s the airlines began to raise concerns over the safety implications of FAR 121.311 which, in effect, allows "lap held" children, under the age of two, aboard aircraft.

- These concerns culminated in a February 1990 ATA petition to the FAA which would have required that all passengers, including those under two, be appropriately restrained.

- Subsequently, the FAA performed the now well known "risk/risk analysis" of the proposal and concluded that such a regulation could well result in an increase in infant deaths due to the diversion of travelers from air to the less safe, highway mode. Although understandably controversial, it must be said that this type of systematic analysis of any regulatory action bears careful thought and attention if we are to avoid inadvertent harm. Frankly, the FAA's point is a very valid concern.

- Still later, while the ATA petition was still pending, additional facts began to emerge concerning the design adequacy of certain child restraint systems currently approved for use aboard aircraft by the government. In a nutshell, the Civil Aeromedical Institute raised substantial questions as to the effectiveness of many forward facing devices due to variations in the device attachment points on aircraft versus automotive seats.

- Almost simultaneously with the release of the information concerning device effectiveness, however, the FAA approached the airlines to suggest that the best way to address the overall issue of the use of child restraints was through public education and, they hoped, through carrier programs to promote the use of these devices. While the carriers agree that public education and market driven solutions are to be preferred to regulation where possible, the carriers also believe that we need a logical, well structured approach to these issues.

We told the FAA then, and continue to believe, that three things must happen before we move forward. First, the regulatory authorities must decide on the basis of size and weight which children require specialized restraint devices; second, we must have design standards for these child restraint systems which are effective in all modes of transportation and can be used interchangeably across modes. Third, we then must take the steps necessary to phase in those appropriate devices in a seamless and organized fashion. Only when that occurs will we be in a position to move forward with either an education and promotion campaign to assure the use of appropriate systems or to pursue some type of mandatory requirement.

At the request of the FAA, we withdrew our petition to require use of these devices in May of last year. This was done in order to help clear away what were described as "complications" for the FAA in moving to resolve these issues. As we said at that time:

> "We would note that this action does not reflect a fundamental change in policy -- the airlines remain absolutely committed to the safety of all passengers including (if not especially) their youngest passengers. We are hopeful, however, that by withdrawing this petition in the context of FAA's plan to address the key adequacy issue, real and rapid progress will result. We look forward to working with the FAA, Congress, the flight attendants and all interested parties in finding the correct solution to this matter.

It is our expectation that once the FAA has addressed the design adequacy issues appropriate, market based solutions will emerge to ensure that all traveling infants are appropriately seated/restrained. Obviously, should circumstances warrant, the airlines may opt to resubmit an updated version of the withdrawn petition. We presently anticipate a reassessment of this situation early next year."

Unfortunately, to date the design adequacy issues remain unresolved. DOT, FAA Headquarters, the FAA Technical Center, CAMI, the National Highway Traffic Safety Administration, the Society of Automotive Engineers, all continue to have bits and pieces of this without anyone seeming to take charge of forcing resolution of the key issues. To our knowledge, no one has mapped a course to really resolve these matters. (Last week we learned for example that "new" CAMI tests were just performed on a platform device to be placed under the infant seat which improved performance. While we hope that this is a positive sign, the timing and test procedures leave many unanswered questions.)

In conclusion, Mr. Chairman, I would summarize our position as follows:

1. We believe that all passengers, including children, should be appropriately restrained.

2. We believe that both the FAA's risk analysis, which raises substantial concerns about broader child safety issues, and the CAMI test results, which

question the design integrity of certain devices, must be considered and resolved.

3. We believe that with the proper resolution of the device adequacy issue, market driven solutions would likely provide the most effective means to address the FAA's risk analysis issues. At the same time we recognize the possible role for mandatory action if it is ultimately determined that market forces do not produce optimum results.

Thank you very much for the opportunity to appear before you today. I would be pleased to respond to any questions.

MEMORANDUM

TO: **TOM FREEDMAN, MARY L. SMITH**

FROM: **DREW HANSEN**

RE: **CHILD SAFETY IN COMMERCIAL AIRPLANES**

DATE: **JULY 12, 1997**

SUMMARY

An estimated 10,000 children each day fly as "lap children," held in the laps of an accompanying adult instead of being secured in a separate seat by a certified Child Restraint System (CRS). These children are exposed to serious risk of injury or death in case of an accident or turbulence. Current FAA policy is to "strongly encourage," but not mandate, the use of a CRS for children under two years of age. The FAA has opposed a CRS mandate because of fears that the increased cost of buying an extra seat would lead many families to drive, leading to a net increase in injury and death, and because there are some technical problems with adapting existing CRS's to airplane use. Legislation pending in the House (H.R. 754 and 1141) and Senate (S. 398) would require the use of CRS's for children under two years of age.

PROBLEM

Children under two years of age have long been permitted to sit in their parent's laps during air travel. An estimated 10,000 children per day travel in this manner. But safety experts say that an unrestrained child traveling in an adult's lap runs a much higher risk of injury or death in case of air turbulence or a plane crash than a child secured by a separate child restraint system (CRS) on an adjacent seat. From 1978-1994, five children under two died in plane accidents who would have lived had they been in child seats. During the same period, ten injuries to children under two might have been prevented by the use of child seats.

Several recent incidents involving "lap children" have brought the matter to the public's attention. On July 19, 1989, United Airlines Flight 232 crashed in Sioux City, Iowa. Of the four unrestrained children on that flight, one was found in an overhead bin 15 rows behind the original seat, and one died from smoke inhalation in the ensuing fire. On July 12, 1994, a DC-9 flown by US Air crashed in Charlotte, North Carolina. There were 37 fatal injuries on the flight, including a 9-month-old unrestrained child who was hurled three rows from her mother's arms and died of massive head injuries. Air turbulence also poses serious risks to the unrestrained child. On a flight in June of 1995, an unrestrained child flew through the air during a patch of turbulence, but was caught by a fellow passenger. In 1990, a DC-10 encountered turbulence near Puerto Rico. The only injury on the flight was sustained by an unrestrained infant, who suffered a fractured skull.

The use of child restraint systems has prevented injury or death in several other airline accidents. On July 6, 1996, the engine of Delta Flight 1288 exploded on the runway in Pensacola, Florida. Several passengers were killed instantly, but a 15-month-old suffered only a scratch on her neck because her parents had strapped her into a CRS in a separate seat. On September 6, 1992, a Piper PA-30 crashed at Broussard, Louisiana. Parts of both wings and both horizontal stabilizers were torn off before impact. A four-year-old boy and ten-month-old girl who sat in child restraint systems in the rear bench seat suffered serious injuries, but survived. Their father was killed.

PROPOSED SOLUTION

Many organizations, including the National Transportation Safety Board (NTSB), the Aviation Consumer Action Project, and the Association of Flight Attendants (AFA), have supported legislation that would mandate the use of child restraint systems on commercial aircraft. On February 12, 1997, the White House Commission on Aviation Safety and Security Bills, headed by Vice President Gore, recommended that "all infants and small children below the weight of 40 pounds and under the height of 40 inches be restrained in an appropriate child restraint system, such as child safety seats, appropriate to their height and weight." Bills to this effect were introduced in the 104th Congress by Rep. Lightfoot (R-IA, H.R. 1309) and in the 105th Congress by Rep. DeFazio (D-OR, H.R. 754 and 1141) and Sen. Murray (D-WA, S. 398). Copies of H.R. 754 and 1141 and S. 398 are attached.[1]

POSSIBLE DIFFICULTIES WITH MANDATORY CRS LEGISLATION

1. Increased injury and death from travel diversion.

The FAA has refused to issue regulations mandating the use of child restraint systems because of fears that the increased cost to families of purchasing an extra seat would cause more of them to drive to their destination, leading to a net increase in injuries and fatalities.

A study by Apogee Research in 1990 found that the average cost of a trip to each family under mandatory CRS legislation would be $185, leading to a total additional expenditure of $252 million per year on airfare. Faced with this situation, Apogee predicted that 17% of families would forgo travel entirely or divert to another mode of travel, leading to a net increase of 1.6 fatalities, 4.8 serious injuries, and 218 minor injuries per year. The conclusions of this study were supported in broad outline by later studies by Windle and Dresner of the University of Maryland (1990) and in a briefing paper by McKenzie and Lee that was published by the Cato Institute (1990). Apogee conducted a second study for the FAA in 1993 coming to essentially the same conclusions. In the second study, however, Apogee contended that 95% of the safety gains of mandatory CRS legislation could be realized at low additional cost by requiring airlines to reserve

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[1]H.R. 754 and S. 398 are almost identical; H.R. 1141 adds the provision that airlines would be prohibited from charging a price for the required additional seat that exceeds the lowest price charged by the carrier to any other paying passenger on the same flight.

empty seats next to parents with young children until the plane was absolutely full.[2]

Finally, a DOT-FAA study conducted pursuant to section 522 of the Federal Aviation Authorization Act of 1994 confirmed the results of earlier studies. The DOT-FAA study found that a CRS mandate could prevent an estimated five infant fatalities over ten years. But the additional cost over ten years, assuming that the family pays full fare for every family seat, would be about $200 to each family, per family trip, leading to an additional cost to families of $109 million per year. In such a situation, 27% of families would still travel by air, 53% would not travel at all, and 20% would choose other modes of transportation. The shift to other modes of transportation would cause 82 more deaths among children and adults over ten years. Even if airlines responded to a mandatory CRS rule by lowering fares for infants or by some other marketing strategy, some travel diversion would still occur. The DOT-FAA study found that if carriers charged only 25% of the full fare, some families would still choose other forms of transportation, leading to a net increase of 17 child and adult deaths over ten years.

Instead of requiring CRS use, therefore, the FAA has embarked on a public education campaign strongly encouraging their use. In addition, Secretary Peña has asked carriers to establish incentives for parents to purchase seats for infants. Southwest Airlines, for instance, offers a discounted fare for children under two years of age.

But the results of these studies have been challenged by other organizations. The National Transportation Safety Board (NTSB), a longtime advocate of mandatory CRS legislation, has charged that the FAA studies are "based upon incomplete analysis."[3] The central contention of the NTSB is that airlines will not risk the revenue loss caused by entire families diverting to other forms of transportation, and will respond with innovations such as free seats for infants, group discounts, or special fares for traveling at off-peak times. In testimony before the U.S. House of Representatives on July 20, 1990, the Vice President of Operations for the Air Transport Association said that airlines would offer a special fare arrangement for families with infants "rather than risk the loss of one or more adult fares or perhaps an entire family unit." Even the DOT-FAA study concluded that there would be no net increase in infant fatalities if airlines charged 20% of the full fare, although travel diversion in this scenario would still lead to an additional 12.8 non-infant fatalities over ten years. Of course, if airlines chose not to charge to provide separate seats for infants in CRS's, there would be no net increase in deaths or injuries.

In response to the FAA studies, the Association of Flight Attendants (AFA) commissioned a study by Darryl Jenkins, a visiting scholar at the International Institute of Tourism Research at George Washington University, to re-examine the economic arguments on requiring CRS use.

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[2]According to a July 3, 1997 article in the *New York Times,* many airlines will often reserve the seat next to a parent who does not buy a ticket for an infant. But these seats are not guaranteed on heavily booked flights.

[3]Testimony of Barry Sweedler, Director of the Office of Safety Recommendations, National Transportation Safety Board, before the Subcommittee on Aviation of the House Committee on Transportation and Infrastructure, August 1, 1996, p. 2.

The AFA study contended that the FAA studies were based on incorrect modeling assumptions. According to the AFA study, the FAA studies did not have key data to determine price sensitivity, used an industry demand curve that unrealistically simplified a complex situation, did not take into account the price competition generated by low-fare carriers, and did not take into account the effects of income sensitivity. Basically, the contentions of the AFA study are 1.) that the airline industry is increasingly dominated by low-cost carriers, especially on frequently traveled routes, who are forcing prices down, and 2.) that the FAA studies incorrectly used "price elasticity" (who would choose not to fly if the cost increased) as a surrogate for "cross-elasticity" (who would switch into other modes of transportation, such as automobiles, if the cost of flying increased).

A key to resolving this dispute seems to be whether or not airlines are willing to follow the lead of Southwest Airlines and offer specially discounted fares for children under two years of age. **The cuts in fares for children under two announced in the last two weeks seems to indicate that airlines are willing to cut fares to encourage families to buy a separate seat for their young child.** On July 2, 1997, American Airlines announced that children under two could ride in a separate seat for a fare of only 50% of the fare of the accompanying adult.[4] This policy was quickly adopted by United Airlines, Delta, Northwest, and Continental. Contrary to FAA assumptions, the new pricing policy would not lead to a loss of airline revenue but could even lead to a small net gain. Robert W. Baker, the Vice President of Operations of American airlines, said in the July 3, 1997 *New York Times* that American expected a modest increase in revenue as a result of the new fare.

2. Technical difficulties with CRS use in airplanes.

The second main argument against mandatory CRS legislation is that there are technical difficulties with using existing CRS's in airplanes. **But even with these difficulties, children under two are always safer in an existing CRS than on the lap of an accompanying adult.** The FAA currently recommends that children weighing under 20 pounds be restrained in a certified, rear-facing CRS, that children weighing between 20 and 40 pounds be restrained in a certified, forward-facing CRS, and that children weighing over 40 pounds be strapped in a regular lap belt. Margaret Gilligan, FAA Deputy Associate Administrator for Regulation and Certification, said last year in testimony before the House Subcommittee on Aviation that although the FAA is continuing their research on CRS design to achieve a greater safety margin, "no one contests our finding that children are better off in currently-marketed, approved CRS's [than in the lap of an accompanying adult]."[5]

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[4]Because the FAA studies are based on full-fare data, a 50% discount from the fare of the accompanying adult could approach the FAA's 20% threshold for no net gain in infant fatalities from travel diversion. If the accompanying adult was traveling on a special reduced-price ticket, for instance, a 50% discount on such a fare could be a considerable markdown from the price of a full-fare ticket.

[5]Margaret Gilligan, Testimony before the Subcommittee on Aviation of the House Committee on Transportation and Infrastructure, August 1, 1996, p. 5.

A major study by the Civil Aeromedical Institute (CAMI) in 1994 also found that while current CRS designs were not perfect, they still provided more protection than sitting on the lap of an adult. An infant in a front-facing CRS, although still exposed to serious risks, was found to be safer than if he or she were held by an accompanying adult. The use of a rear-facing CRS, though, was found to be a "definite safety benefit."[6] However, both front- and rear-facing CRS's were found to be often difficult to install and inconvenient to other passengers and staff. A forward-facing CRS is sometimes too big to install in seats with fixed arm rests, and airline lap belts often do not suitably secure the CRS to the seat. In addition, the lap belt does not always protect the child from being thrown out of the CRS and hitting his or her head on the forward row seat. A rear-facing CRS often interferes with passage between seat rows and the recline motion of a forward row seat.

Because of these difficulties, many efforts are currently underway to develop a CRS that would be more suitable for airline use:

- The Society of Automotive Engineers (SAE), an ad-hoc group, is currently trying to develop a standard of compatibility between seats for cars and seats for airplanes.
- The FAA is working on developing new types of restraints for children and better ways to secure a conventional CRS to an airplane seat.
- The FAA is also developing a prototype "platform" for in-seat installation of a forward-facing CRS, which in preliminary tests has significantly increased the effectiveness of forward-facing CRS's.
- Two projects are currently underway, one in the United States and one in Canada, to develop an airplane-specific CRS. Both prototypes have been tested at CAMI in both forward- and rear-facing positions, and both performed much better than any currently available CRS.

In short, the use of any certified CRS provides better protection than being carried on the lap of an accompanying adult, although a rear-facing CRS is generally preferable to a forward-facing one. Advances in technology for an airplane-specific CRS and for better installation of conventional CRS devices should lead to even greater safety benefits for young children.

CONCLUSION

The recent fare cuts by U.S. airlines for children under two years old, the proven safety record of existing CRS's in airplanes, and the ongoing development of better CRS's seem to remove many of the problems with mandatory CRS legislation. H.R. 754 and 1141 and S. 398 would follow the recommendations of the NTSB, the Gore Commission, and many other organizations by requiring children under two years of age to be restrained in a CRS in a separate seat, potentially preventing several fatalities and deaths among infants in the next ten years.

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[6]Civil Aeromedical Institute, "The Performance of Child Restraint Devices in Transport Airplane Passenger Seats," OAM Report AM-94-19, September, 1994, p. 22.

(o-sponsor
S Inouye
6/9/97

Congress of the United States
House of Representatives
Washington, DC 20515

PROTECT OUR TINIEST TRAVELERS
SUPPORT MANDATORY CHILD RESTRAINT SEATS ON AIRCRAFT

February 4, 1997

Dear Colleague:

Last Congress you cosponsored H.R.1309, a bill to require the use of child safety restraint systems on commercial aircraft. We hope you will join us as an original cosponsor of identical legislation which we plan to introduce this month.

As you know, current Federal Air Regulations do not require infants under the age of two to be in a restraint system while in flight. Time and time again this shortsighted policy has led to tragic consequences. Every year, "lap babies" are injured during emergency situations and turbulence. Airline disasters in Charlotte, North Carolina and Sioux City, Iowa resulted in infant deaths. In both tragedies child restraint systems were not utilized. Last year, a child safety restraint system on an airline saved an infant's life when the engine exploded upon takeoff, killing two other passengers.

Adults are required to wear safety belts, our luggage and labtop computers are required to be stored. Yet, our youngest passengers are exempt from basic safety requirements. Even a coffee pot has more protection on an airplane than an infant in the event of severe turbulence or a crash.

Continually, the FAA defends its misguided policy based on a commissioned study which concluded that mandating child restraint systems on air carrier flights would result in a net increase in fatalities because passengers would instead choose to travel by car. The National Transportation Safety Board has reviewed the FAA's study and concluded that the results were based on an incomplete analysis and faulty assumptions. <u>In fact, no actual airline travelers were consulted in the FAA study.</u>

The National Transportation Safety Board, the Association of Flight Attendants and the Airline Pilots Association all strongly support the required use of child safety restraint systems on commercial aircraft.

We plan to introduce this legislation soon and hope you will join us as an original cosponsor by contacting Kathie Eastman (DeFazio) at 5-6416 or Kristin Miller (Shays) at 5-5541.

Sincerely,

Peter A. DeFazio
Member of Congress

Christopher Shays
Member of Congress

Congress of the United States
House of Representatives
Washington, DC 20515

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Peter A. DeFazio
Member of Congress

Christopher Shays
Member of Congress

Congress of the United States

Washington, DC 20515

Shouldn't your child be just as safe in an airplane as in your car?
Support Mandatory Child Safety Seats

March 10, 1997

Dear Colleague:

We invite you to cosponsor H.R. 754 to require mandatory child restraint seats on commercial aircraft.

All 50 states have laws requiring children to use safety seats in automobiles, yet children under the age of two are not required by law to use safety seats when traveling by airplane.

You buckle up your child in your car when driving 25 miles per hour, why not do the same in an airplane traveling more than 500 miles per hour?

Vice President Gore recently released a report of the White House Commission on Aviation Safety and Security. In this report, the Vice President argues for changing current regulations to require all children under the age of two to be restrained in the proper child safety seat, according to their height and weight. Our legislation accomplishes this goal.

Current Federal Aviation Administration (FAA) regulations require adults and children over the age of two to have their own seats and wear seatbelts. But small children under the age of two are allowed to travel without safety restraint seats or any form of real protection.

The National Transportation Safety Board, the Association of Flight Attendants and the Airline Pilots Association strongly support the required use of child safety restraint seats on commercial aircraft.

Support this common sense, life-saving legislation before any more children are injured or killed.

To join us as a cosponsor of this important legislation contact Kathie Eastman (DeFazio) at 5-6416 or Kristin Miller (Shays) at 5-5541.

Sincerely,

Peter DeFazio
Member of Congress

Christopher Shays
Member of Congress

LEVEL 1 - 2 OF 2 STORIES

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Good Housekeeping

April, 1997

SECTION: No. 4, Vol. 224; Pg. 26; ISSN: 0017-209X

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LENGTH: 595 words

HEADLINE: Protecting tiny travelers from plane disasters; mandatory child safety seat in airplanes' bill defeated in Congress

BYLINE: Roberts, Roxanne

BODY:

At 2:00 P.M. on July 6, 1996, in Pensacola, FL, Delta Flight 1288 was readying for takeoff. Inside the cabin, Kathleen Tourtellotte quickly made the sign of the cross over herself and her 15-month-old daughter, Emma. It was a longtime habit of Kathleen's, a way of securing divine protection during plane trips. "We have to cross Daddy too," she said, reaching over Emma -- who was strapped into a car seat in the middle of the row - to her husband, David, seated by the window.

Seconds later, as the plane roared down the runway, its engine exploded, blasting smoke and shards of burning metal into the cabin. "Cover the baby! Cover the baby!" David screamed. The terrified parents flung their bodies over Emma as the plane screeched to a stop.

As Kathleen, then three months pregnant, glanced around her, she saw nearby passengers slumped over and covered in blood. Just one row ahead, they would later learn, a woman and her 12-year-old son had been killed instantly.

But miraculously, the Tourtellottes -- who were returning to their Virginia home from a July 4 family reunion -- were unhurt; baby Emma sustained only a scratch on her neck. According to an investigator with the National Transportation Safety Board (NTSB), Emma was saved from serious injury because her parents had bought her a separate seat -- even though airline regulations permit children under 2 to sit on a parent's lap.

Emma's near miss inspired the Tourtellottes to become actively involved in the campaign to mandate child safety seats on planes. Last summer, the couple recounted their ordeal at a congressional hearing held in conjunction with a bill sponsored by Representative Jim Lightfoot (R-1A).

"I didn't want to spend the extra money when the baby could fly for free if she sat on Kathleen's lap," recalled David, 33. As an engineer, he told the panel, he knew the odds were against the plane crashing: "I had a better chance

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of winning the lottery." But Kathleen, a 31-year-old kindergarten teacher, argued for buying the seat. According to David, "What finally sold me was when Kathleen said, 'Isn't our daughter's life worth two hundred dollars?'"

Representatives of pilots' groups, flight attendants, the NTSB, and consumer safety groups all testified on behalf of the bill. But the Federal Aviation Administration (FAA), which serves as both advocate and watchdog for the airline industry, opposed it. At the hearings, FAA officials insisted that requiring paid seats for children under 2 would force budget-conscious families to drive rather than fly -- resulting in more **children** being injured in automobile accidents.

But independent industry experts believe the **airlines would lower** their fares for tots rather than risk losing billions of dollars in family business. As Lightfoot said at the hearings, "It's not right that luggage and pets have to be safely secured when our children do not."

Though the Lightfoot bill was defeated, Representative Peter DeFazio (D-OR) has plans to introduce similar legislation this spring. Meanwhile the Tourtellottes, busy with Emma and their new baby, Ethan, continue to speak out. "It's been hard going through this again and again," says David, "but we're determined to do something." Adds Kathleen: "If one child is saved because his parents heard our story, what happened was worth it."

Meanwhile, the Tourtellottes urge families to view safety seats as a necessity -- not a luxury. "Chances are nothing is going to happen," says David. "But could you live with yourself if something did?"

GRAPHIC: Illustration; Photograph

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National Transportation Safety Board

Washington, D.C. 20594

Safety Information

Testimony of

Barry Sweedler, Director

Office of Safety Recommendations

National Transportation Safety Board

before the

Committee on Transportation and Infrastructure

Subcommittee on Aviation

House of Representatives

Regarding

Legislation to Require the Use of Child Safety Restraint Systems

Aboard Aircraft

August 1, 1996

Good morning, Chairman Duncan and Members of the Committee. The National Transportation Safety Board is pleased to offer testimony in support of legislation to require the use of child safety restraint systems aboard aircraft.

As you are aware, the National Transportation Safety Board issued its first safety recommendation regarding child restraints aboard aircraft in 1979. At that time, the Board recommended that the Federal Aviation Administration (FAA) "Expedite research with a view toward early rulemaking on a means to most effectively restrain infants and small children during in-flight upsets and survivable crash landings." Since then, we have continued to issue recommendations on this subject, including a 1990 recommendation that all occupants be restrained during takeoff, landing and turbulent conditions, and that all infants and small children be restrained in an approved child restraint system. Unfortunately, there is still no requirement to properly restrain infants and other small children -- the only passengers, crew, baggage or service equipment on the airplane not requiring restraint.

The Safety Board testified before this Committee six years ago on the subject of child restraints in aircraft. At that hearing, the Safety Board concluded that unrestrained infants and small children were not being offered the same level of protection as other occupants, and that unrestrained children expose other occupants in the cabin to an increased risk of injury.

A recent accident points out our continued concern. An unrestrained infant was killed during a DC-9 accident near the Charlotte/Douglas International Airport,

Charlotte, North Carolina on July 12, 1994. Thirty seven passengers received fatal injuries, including a 9-month old in-lap infant who was held by her mother in the last row of the cabin. The child's mother was unable to hold onto the child during the impact sequence and the baby died of massive head injuries. The mother survived with fractures to her elbow and arm.

As a result of its investigation of that accident, the Safety Board issued two safety recommendations to the FAA, urging it to require that all infants and small children be restrained in a manner appropriate to their size, and to develop standards for forward-facing, integrated child safety seats for transport category aircraft.

The FAA responded by urging the Safety Board to reconsider its recommendation for regulatory action to mandate the use of child restraints in favor of non-regulatory measures. The FAA based its response on a two-volume report to Congress entitled "Child Restraint Systems." The Safety Board recognized that the FAA expended considerable time and resources to develop the report, which concluded that mandating child restraint systems (CRS) on air carrier flights could result in some passenger diversions to automobiles, resulting in a net decrease in safety. The Safety Board believes that the FAA's projected costs to air travelers, revenue losses to airlines, and passenger diversions to automobiles as a result of mandated CRS for infants are based upon incomplete analysis.

The scenarios proposed by the FAA that result in passenger diversions to automobiles and a net safety reduction are based on the premise that substantially

higher air fares for families traveling with children will create those diversions. These diversions are based on the FAA's elasticity estimates that characterize families traveling with children being highly price sensitive.

Given the FAA's assumed price sensitivity for these travelers, the Safety Board believes that if airlines were to charge a substantial fare for infants who currently are traveling free, the initial reduction in air travel would result in a substantial revenue loss for airlines, causing them to incur the FAA study's revenue loss estimate of up to $6 billion over a 10-year period. However, the Safety Board is certain that the airlines will not let $6 billion worth of price-sensitive travelers shift to the automobile without a competitive response. Airlines could offer any number of innovations to keep the families flying, such as free seats for infants or group discounts. The FAA study recognizes this likelihood in a passage on pages 7-1 that states, "Air carriers are expected to charge for infants only with the possibility of minimal passenger diversions and no net loss of revenues. Those charges would occur during peak travel seasons [when the report predicts families are least likely to switch to automobiles] and peak period of the day. [Families] may be offered significant infant fare discounts or free infant passage during off-peak periods."

In testimony before the U.S. House of Representatives on July 20, 1990, the Vice President of Operations for the Air Transport Association stated that with regard to potential passenger diversion to automobiles, air carriers "rather than risk the loss of one or more adult fares or perhaps an entire family unit, will offer a fare arrangement acceptable even for families traveling with infants who previously would have flown free."

The airlines are likely to permanently impose higher fares for infants only if they discover that the families traveling with infants are less price sensitive in practice than anticipated by the FAA. In that event, again, there would be limited diversion of passengers to automobiles and the added risk of automobile accidents.

The Safety Board notes that the FAA study selected what it labeled "Scenario Number 4" as the CRS option that prevented the most injuries and fatalities, with the least economic impact to air carriers. The study describes this scenario as one in which a family could reserve a seat for an infant traveler on a space-available basis, providing their own CRS., The Safety Board observes that this scenario is functionally identical to the current situation, in which airlines permit families to secure CRS on empty seats, when available. Thus, Scenario 4 would result in no net safety improvement.

Consequently, the Safety Board believes that the FAA's projected costs to air travelers, revenue losses to airlines, and passenger diversions to automobiles as a result of mandated CRS for infants are based upon incomplete analysis.

The Safety Board also noted the FAA's intention to develop a nationwide public education campaign to promote the use of child restraints. The Safety Board does not, however, believe that education alone will result in the protection of infants and small children on airplanes. Education alone did not result in high usage of CRS in automobiles; consequently, all 50 states and the District of Columbia now have mandatory, automobile child restraint laws. The Safety Board was pleased to learn that Secretary Pena wrote to air carriers asking that they establish incentives that

encourage parents to fly with properly restrained children; the efforts made by Southwest Airlines to offer a discount fare to children who use CRS were consistent with such efforts.

Another problem identified by the Safety Board is the issue of FAA enforcement of the regulation that requires all passengers who have reached their second birthday to be restrained during takeoff and landing. The Safety Board has identified at least six cases in which children more than 2 years old were unrestrained because they were held in an adult's lap. The ages of these children ranged from 26 months to 5 years old. In an accident report adopted two days ago -- the June 1995 ValuJet accident in which a DC-9 burned on an Atlanta runway after an engine failure -- the Safety Board stated that although it does not agree with the existing regulation, until such time as restraints are required for all occupants, the Safety Board recommended that the FAA provide guidance on how to implement its requirements that occupants who are older than 2 years of age be restrained during takeoffs and landings.

The Safety Board is pleased to report to the committee that it has investigated two accidents in which CRS were used and provided protection to children; one air carrier accident and one general aviation accident.

On September 6, 1992, a Piper PA-30 entered an uncontrolled descent and crashed at Broussard, Louisiana. Parts of both wings and both horizontal stabilizers separated before the airplane struck the ground. Although the impact involved high vertical and side loads, a 4-year-old boy and a 10-month-old girl who occupied the

rear bench seat in child restraint systems survived the accident with serious injuries. Their father was killed. The Safety Board determined that the children survived because they occupied CRS.

More recently, the Board investigated an MD-80 accident at Pensacola on July 6, 1996. This accident appears to be the first fatal air carrier accident in which a child restraint system (CRS) was used. Although the Safety Board is still investigating this accident, photographs show that the frame of the CRS provided protection against debris. The family that used the CRS was seated in a row directly behind a row in which two passengers sustained fatal injuries. According to the parents, the CRS protected their daughter from being injured.

Mr. Chairman, the Safety Board has, over the past 25 years, issued various recommendations that urged the FAA to solve the problems associated with unrestrained children. The Safety Board believes that protection for children should not be a "safety option." It is time for the FAA to require that all occupants be restrained.

That concludes my formal statement, Mr. Chairman. I will be pleased to respond to any questions that you may have.

STATEMENT OF MARGARET GILLIGAN, DEPUTY ASSOCIATE ADMINISTRATOR FOR REGULATION AND CERTIFICATION, FEDERAL AVIATION ADMINISTRATION, BEFORE THE HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE, SUBCOMMITTEE ON AVIATION, CONCERNING H.R. 1309. AUGUST 1, 1996.

Mr. Chairman and Members of the Subcommittee:

I welcome the opportunity to appear before the Subcommittee to discuss H.R. 1309, legislation sponsored by Representative Lightfoot to require the use of child safety restraint systems aboard commercial aircraft. Accompanying me today is Louise E. Maillett, Acting Assistant Administrator for Policy, Planning, and International Aviation.

Children under the age of two are permitted to travel on commercial aircraft when seated on the lap of an accompanying adult. However, FAA strongly encourages the use of a certified child restraint system for small infants and children traveling in air transportation. FAA does not require the use of child restraint systems, or CRS's, because our study of the issue has led us to believe that to do so would result in a larger number of deaths and injuries from diversion of passengers to a less safe mode of transportation.

The position we have taken to date can sound jarring. But the rationale behind it has been supported by several studies comprised of thorough analysis by both FAA and outside experts in transportation and economics.

This analysis was most recently updated as part of the FAA's mandate to report to Congress on child restraint systems under section 522 of the Federal Aviation Authorization Act of 1994. This report was issued in May of 1995, and the analysis conducted in conjunction with the report supports the results of previous work on CRS use aboard aircraft.

Let me take a moment to explain the results of the study.

- First, the study found that, when CRS's that are fully effective for all infant and small children weights become available for use in aircraft, a CRS mandate could prevent an estimated five infant fatalities over the next ten years.

- If CRS's are mandated and families pay full fare for every family seat, the average additional cost over ten years would be about $200 to each family, per family trip. In other words, families would pay an additional $109 million per year to fly.

- Families will react differently to the price increases, but in general, families are very price sensitive. Where travel by another means, such as the automobile, is an option, our study found that if families traveling with infants are charged full fare, only 27 percent of families would still travel by air. Over half, or 53 percent, of families would not travel at all. Twenty percent of families would choose other modes of transportation. And that's the problem.

- Any other mode of transportation is less safe than air transportation. As a result of that 20 percent shift, it is estimated that 82 more deaths would occur among children and adults over ten years.

- It has been pointed out that, if CRS use were mandated, carriers might act to keep families as customers by choosing to lower fares for infants, or via some other marketing strategy. Our study took that possibility into account and found that were air carriers to charge just 25 percent of the full fare price, some families would still choose another way to get to their destination. There would still be an increase of 17 child and adult deaths over ten years.

The bottom line, Mr. Chairman, is that our study of the issue of mandating the use of CRS's for children under two years of age tells us that to require such use could result in more deaths and injuries, unless airlines choose not to charge to provide a separate seat for the use of CRS's. As you know, the FAA does not have the economic authority to require that airlines charge any price, or no price, for any seat. With that in mind, we chose what we believed to be the best approach under the circumstances -- a policy of strongly encouraging the use of CRS's aboard aircraft.

In June of last year, FAA initiated its campaign to get children "off laps and into straps". FAA Deputy Administrator Linda Hall Daschle announced several activities underway to

further the goal of enhancing air safety for children by advocating the use of effective CRS's appropriate for aircraft.

As a result of research conducted by FAA's Civil Aeromedical Institute, or CAMI, in 1994, FAA announced a proposed regulation that would ban the use of booster seats and harness and vest restraints on aircraft. CAMI studies revealed that these devices do not provide adequate protection for young children aboard aircraft. The final rule banning the use of such restraints was published on June 4 of this year, along with a National Highway Traffic Safety Administration (NHTSA) rule prohibiting certification of such devices for use aboard aircraft, and requiring that those devices be labeled as not certified for use in aircraft. These regulations become effective on September 3.

We have developed useful guidance to inform parents and others who are confused by the array of seats or other devices on the market, and unsure about which type of restraint is appropriate for their child. The recommendations FAA made were based on CAMI test results, and are that children fly restrained as follows:

- Children under 20 pounds should be restrained in a certified, rear-facing CRS;

- Children weighing between 20 and 40 pounds should be restrained in a certified, forward-facing CRS; and

- Children weighing over 40 pounds should use the standard lap belt attached to airline seats, just as an adult would.

I have brought some examples of certified forward and rear-facing seats here this morning, as well as examples of the banned booster and harness devices.

Information on these devices, along with other recommendations and suggestions for safe air travel for families, is available through the FAA Hotline, and available on the World Wide Web. The attachment to my statement is one example of the straightforward written guidance we provide to parents and other interested persons on request.

Let me repeat the most important part of this message. FAA has been absolutely clear since last year on how to best protect children on aircraft. If children weigh less than 40 pounds, the best place for them to be is in a CRS, rear-facing if the child weighs less than 20 pounds; forward-facing for children between 20 and 40 pounds. The best place for children over 40 pounds is in a seat of their own, belted in with the standard lap belt. We continue our research to improve on existing designs to achieve a greater safety margin, but no one contests our finding that children are better off in currently-marketed, approved CRS's.

This fall, we will be launching a major public education campaign designed to ensure that all passengers, including the smallest ones, travel in the safest manner possible. This

nationwide effort will reach out to everyone, including parents, flight attendants, airlines, child safety advocates, and others, to help us and industry continue to get the message out. FAA is also working with the Air Transport Association of America to produce educational materials for dispatchers, pilots, and flight attendants, on turbulence in general, including the restraint of children under turbulent conditions. FAA and other participants, including most major U.S. airlines and McDonnell Douglas, expect to have materials ready for use by May of next year.

Meanwhile, our research into the appropriateness of CRS's for use on aircraft has continued, with studies underway on the efficacy of existing forward-facing restraints in impacts. Research continues to explore development of new restraints or supplementary devices better suited to use aboard aircraft, as well as changes to the manner in which conventional CRS's are secured to the aircraft seat. We have been assisted in this research program by NHTSA, Transport Canada, Australia's civil aviation authority, and the Society of Automotive Engineers.

We have made exciting progress in developing a prototype "platform" for in-seat installation of a forward-facing CRS that, in preliminary testing completed just this month, has resulted in significant improvements in the effectiveness of forward-facing CRS's. We will continue to further explore this development, and will keep you and the American public informed about our results.

Work also continues on the development of an airplane-specific CRS. Working with data contained in the CAMI report, two such projects are underway, one in the U.S. and one in Canada. Both CRS's were tested at CAMI, and have performed well during repeated tests in both the forward and aft-facing positions. Both prototype CRS's demonstrated improved overall retention of the child test dummy and the CRS, far better than when CRS's currently on the market are tested in aircraft seats.

Mr. Chairman, FAA's congressionally mandated study, and the research accompanying it, indicates that mandating child safety seats may result in improved safety for the child whose parents continue to purchase airline tickets, but worsens the situation for those children and adults who cannot afford the increased cost of flying, even when that cost is significantly discounted.

This is why, instead of the mandatory approach advocated by H.R. 1309, we have adopted a policy of strongly encouraging parents to use CRS's, requesting that airlines develop individual strategies and incentives to encourage families with young children to use CRS's when they travel by air, and developing a nationwide public education campaign to promote the use of CRS's.

We recognize that there has been vigorous debate on these issues. We stand ready to listen to the comments of those who have conducted analysis that does not agree with ours, and we will continue to work with parents, other safety advocates, and industry to

explore the alternatives. But until there is definitive research that proves the contrary, we must not place children whose parents are unwilling or unable to make the additional investment in transportation at greater risk.

This concludes my prepared statement, Mr. Chairman. Ms. Maillett and I would be pleased to respond to any questions you may have at this time.

ftp://ftp.loc.gov/pub/thomas/c104/h1309.ih.txt

FILE h1309.ih

HR 1309 IH
104th CONGRESS
1st Session

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft.

IN THE HOUSE OF REPRESENTATIVES

MARCH 23, 1995

Mr. LIGHTFOOT (for himself, Mr. LAZIO of New York, Mr. CLINGER, Mr. DORNAN, Mr. LANTOS, Mrs. MEEK of Florida, Mrs. MALONEY, Mr. NADLER, Mr. RAHALL, Mr. SCHAEFER, Mr. SHAYS, Mr. STARK, Mr. VENTO, Mr. WELDON of Florida, and Mr. WYNN) introduced the following bill; which was referred to the Committee on Transportation and Infrastructure

A BILL

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft.

[Italic->] Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, [<-Italic]

SECTION 1. CHILD RESTRAINT SYSTEMS ON COMMERCIAL AIRCRAFT.

(a) IN GENERAL- Chapter 447 of title 49, United States Code, is amended by adding at the end the following new section:

`Sec. 44724. Child restraint systems

`Not later than 90 days after the date of the enactment of this section, the Secretary shall issue regulations requiring the use of child safety restraint systems approved by the Secretary on any aircraft operated by an air carrier in providing interstate air transportation, intrastate transportation, or overseas air transportation. Such regulations shall establish age or weight limits for children who are to use such systems.'.

(b) CLERICAL AMENDMENT- The table of sections at the beginning of such chapter is amended by adding at the end the following new item:

`44724. Child restraint systems.'.

SEC. 2. INTERNATIONAL STANDARD.

It is the sense of Congress that the United States representative to the International Civil Aviation Organization should seek an international standard to require that passengers on a civil aviation aircraft be restrained on takeoff and landing and when directed by the captain of such aircraft.

ftp://ftp.loc.gov/pub/thomas/c105/h1141.ih.txt

Rep Peter DeFazio (D-OR)
225 6416 Kathy
Rm 2134

All b/g material, press releases, etc.

FILE h1141.ih

HR 1141 IH

105th CONGRESS
1st Session

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft and to restrict the fares charged by air carriers for air transportation provided to children under 3 years of age.

IN THE HOUSE OF REPRESENTATIVES

March 20, 1997

Mr. DEFAZIO introduced the following bill; which was referred to the Committee on Transportation and Infrastructure

A BILL

To amend title 49, United States Code, to require the use of child safety restraint systems approved by the Secretary of Transportation on commercial aircraft and to restrict the fares charged by air carriers for air transportation provided to children under 3 years of age.

[Italic->] Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, [<-Italic]

SECTION 1. CHILD RESTRAINT SYSTEMS ON COMMERCIAL AIRCRAFT.

(a) IN GENERAL- Chapter 447 of title 49, United States Code, is amended by adding at the end the following new section:

`Sec. 44725. Child restraint systems

`Not later than 90 days after the date of the enactment of this section, the Secretary shall issue regulations requiring the use of child safety restraint systems approved by the Secretary on any aircraft operated by an air carrier in providing interstate air transportation, intrastate transportation, or overseas air transportation. Such regulations shall establish age or weight limits for children who are to use such systems.'.

(b) CLERICAL AMENDMENT- The table of sections at the beginning of such chapter is amended by adding at the end the following new item:

`44725. Child restraint systems.'.

SEC 2. AIR TRANSPORTATION PRICES FOR CHILDREN UNDER 3 YEARS OF AGE.

(a) MAXIMUM PRICE-

(1) IN GENERAL- Chapter 415 of title 49, United States Code, is amended by adding at the end the following new section:

`Sec. 41512. Air transportation prices for children under 3 years of age

`(a) IN GENERAL- An air carrier providing air transportation to a child under 3 years of age on a scheduled flight to any final destination may not charge a price for such air transportation that exceeds the lowest price charged by the air carrier for such air transportation to any other paying passenger on such flight with the same final destination.

`(b) DEFINITIONS- In this section, the following definitions apply:

`(1) AIR CARRIER- The term `air carrier' includes foreign air carriers.

`(2) AIR TRANSPORTATION- The term `air transportation' includes intrastate air transportation.'.

(2) CLERICAL AMENDMENT- The table of sections at the beginning of such chapter is amended by adding at the end the following new item:

`41512. Air transportation prices for children under 3 years of age.'.

(b) SENSE OF CONGRESS- It is the sense of Congress that air carriers should provide air transportation to children under 3 years of age at no charge.

AFA, Leading the Profession

The Association of Flight Attendants, is a union organized by flight attendants to act as their voice in the workplace and to advocate on their behalf in the airline industry, in the halls of Congress and in the Department of Transportation. AFA, which is the leading advocate in many areas affecting flight attendants' working conditions and aviation safety, represents 40,000 flight attendants at 26 air carriers. Our carriers serve all aspects of the aviation industry from commuter to international travel. ■

■

For more information contact the
Government Affairs Department
Association of Flight Attendants, AFL-CIO
1625 Massachusetts Ave., NW
Washington, DC 20036

(202) 328-5400, Ext. 896

Assocation of Flight Attendants

Fact Sheet

Mandatory Child Restraint Seats for Children Under Two Years of Age.

There Is Only One Safe Way To Fly...

Everything on board an airplane must be secured or properly stowed for takeoff, landing and often during flight, according to Federal Aviation Regulations, except children under two years old. Currently travelers may hold little children in their laps during air travel. **We believe this is unsafe.** The Association of Flight Attendants (AFA), AFL-CIO, wants you to know there is a safe way for children to fly and an unsafe way. AFA has been an active supporter of mandatory child restraint seats for children under two years of age for over 10 years. Following the crash landing of a United Airlines flight in Sioux City, AFA began lobbying Congress to mandate the use of restraint seats for our youngest travelers. There were four unrestrained lap children on that flight. One child was killed; another was found in an overhead bin, 15 rows behind where she was originally seated.

In 1995 during the fatal crash of a USAir aircraft in Charlotte, another unrestrained infant was killed when her mother could not hold onto her on impact. The available seat next to the mother survived the crash intact. The National Transportation Safety Board believes that had this child been required to be secured in that seat, she would not have needlessly died. Today, infants are the one "object" unrestrained during take-off and landing. **A coffee pot has more protection than an infant in the event of severe turbulence or a crash.**

The use of child restraint seats on board aircraft has unanimous industry support. In addition, the National Transportation Safety Board has long recommended the establishment of the requirement. Too many unrestrained children have been injured during turbulence or emergency landings or killed during crashes. It is time to provide children under two years of age the same protection as all other passengers.

> *"I will never forget that day in July... Each time I see parents holding their children on their laps on airplanes, I shudder... It is a tragic mistake to allow infants to travel by air unrestrained. Some say it will cost too much for parents to pay for their infants to travel [by air]. If cost is the major concern, we are placing a price tag on a small child's head and engaging in a game of Russian roulette."*
>
> —*Flight attendant in ill-fated Sioux City crash*

ASSOCIATION OF FLIGHT ATTENDANTS AFL-CIO
1625 Massachusetts Avenue, NW. Washington, DC 20036-2212
PHONE 202•328•5400 FAX 202•328•5424

Statement of

Patricia A. Friend

International President

Association of Flight Attendants, AFL-CIO

Before

House Transportation and Infrastructure Committee

Aviation Subcommittee

Child Restraint Systems Aboard Aircraft (H.R. 1309)

August 1, 1996

Mr. Chairman, Members of the Subcommittee, my name is Patricia Friend and I am the International President of the Association of Flight Attendants, AFL-CIO, representing 40,000 flight attendants at 26 carriers. I want to thank you for this opportunity to testify on the issue of mandating child restraints seats for children under two years of age aboard aircraft.

The Association of Flight Attendants has long supported the placement of all air travelers in appropriate seat restraint devices, including infants and small children. We therefore commend Congressman Lightfoot for the tireless fight he has led through the years to assure that all our children are properly restrained and for re-introducing H.R. 1309. H.R. 1309 will ensure that all children under two are protected when traveling on airplanes.

Each day, flight attendants share the skies with millions of people -- adults, children and infants. Federal Aviation Regulations require flight attendants on commercial aviation flights to ensure the safety of passengers. Flight attendants are recognized by the government and by the public as safety professionals -- we are the passengers' link to safety in the airplane cabin.

As such, we believe that everyone who flies deserves the highest level of safety possible. Yet, today our most vulnerable travelers -- little children under two -- have virtually no safety protections at all. Currently, parents are allowed to hold their child on their laps if the child is under two. Every day, hundreds of small children fly without seats or restraints. Flying unrestrained, these little children and infants are at risk of injury and even death during turbulence or a crash. To state it simply, children are not as safe as adults in the airplane cabin.

Listen to the words of a young mother, Tywonda Brown, who flew on USAir Flight 1016. It was a routine flight on approach to the Charlotte airport on July 2nd, 1994. Ms. Brown said, "Suddenly, there was a jolt and my baby flew out of my hands. I tried to hold on to her and I couldn't ...They told me I could hold her on my lap. I would have paid for her to sit in a seat."

The plane crashed at 160 miles per hour and try as she might to hold on to her baby, she was unable to maintain her grasp. Tywonda's daughter, Danasia, was hurled forward five or more rows within the plane -- and died of massive head injuries. As she later stressed, had she known she could have put her daughter in a child restraint seat in an unoccupied seat on the plane, she would have done so.

The National Transportation Safety Board found that this child's death could have been prevented. The NTSB reported that since the seat next to Tywonda survived the crash intact, they believe that had that baby been secured in that seat, she would be alive today. The Board renewed its call for the mandatory use of child restraint seats on aircraft.

The problem is not accidents alone. Turbulence also presents a serious risk for unrestrained infants. In 1974, an infant propped in a regular airplane seat was strangled due to turbulence when it slipped out of the seat and caught its neck on the seatbelt. In four separate incidences in June of 1995, passengers and flight attendants were injured when their flights hit sudden and violent turbulence. In one of these, a flight attendant reported that a lap child, who was walking down the aisle when the turbulence occurred, went flying through the cabin and was caught by another passenger. Frequently, children on their parent's laps sustain injuries when they are

thrown about in turbulence.

A child that breaks free during a crash or turbulence faces two serious hazards. First, the child may be injured as she or he strikes the aircraft interior during the crash. Second, the parents may not be able to find the infant after a crash and the child may therefore be killed by the ensuing fire, as occurred in the Sioux City, Iowa crash. The children who were not properly restrained soared about the aircraft. It was difficult, and in one case impossible, to find the children after impact.

The NTSB, aviation industry groups, consumer groups like the Aviation Consumer Action Project, the Safe America Foundation and SafetyBeltSafe USA, and unions including AFA and the Air Line Pilots Association, have all appealed to the FAA to issue regulations to require the use of restraint seats for children under two. To date, the FAA has failed to require restraint seats for children under two. The agency continues to drag its feet on this crucial aviation survivability issue.

Current FAA policy on the use of child restraint seats strains logic. While regulations require that adults, lap-top computers, carry-on bags and coffee pots be secured during take-off and landing as well as during turbulence, the regulations do not require similar protective measures for little children and infants. So, little children squirm, nap or bounce on adult laps -- they rest on shoulders, stand on parents' knees, susceptible to every bounce, lunge or jolt of the plane. Neither a trained flight attendant nor a parent can protect unrestrained infants when disturbances occur.

Currently, parents who fly with little children have three choices: They can hold their child on their lap. They can carry a child restraint seat with them onto the plane and hope for an empty seat next to them in which to secure the seat and their child. Or, they can purchase an additional seat from the carrier and strap the child into an FAA approved child restraint seat which in turn is secured onto the airline seat. While not foolproof, the third option is the safest one.

A cursory physics lesson will explain why there is only one safe way for children under two to fly. An airplane is designed to withstand 9g of horizontal loads without total destruction. Therefore, given a 9 g force, a 20 pound child would weigh the equivalent of 180 pounds, well beyond the ability of most people to maintain a hold. While they themselves are being jostled and thrust in the direction of the force, there is an emotional component as well. People may panic during continual turbulence. The difficulty of trying to hold onto their child becomes more severe. Grim as it sounds, lap-held children can become "missiles" in a turbulent cabin.

AFA has worked long and hard to correct this safety oversight. Beginning in the early '80s, we have been a strong advocate for mandatory child restraint seats. Our first action was to support a petition for rulemaking on infant restraint devices by the Aviation Consumer Action Project. The FAA did not respond with any proposed rule.

Following the Sioux City/United crash in 1989 on which one lap child was killed, AFA again urged the FAA to respond to the petition. In addition, the Air Transport Association (ATA) petitioned the FAA calling for the issuance of a rule requiring the use of child restraints. According to an FAA spokesperson at that time, "there haven't been enough infants killed on

airlines to justify changing [the law.]"

In March of 1990, the FAA issued a Notice of Proposed Rulemaking entitled "Miscellaneous Operational Amendments." It included language on child restraint seats. Despite AFA's comments on child restraint seat requirements, the agency's final rule stated that carriers would have to allow parents to use approved child restraint seats if the parent chose to, but the FAA did not mandate the use of seats. They have continued to allow this dangerous practice of holding babies on laps during flight.

Through the years, the FAA has taken various positions on this issue, even going through the motions of issuing a brochure favoring the use of restraint devices. First stated in 1990, during a House Aviation Subcommittee hearing, the FAA still relies on a position based on an inaccurate economic analysis of travel patterns.

The FAA contends the use of child restraint seats will cause more travelers to be injured or killed because more travelers would drive on the nation's highways than would fly. Their argument assumes that some families who cannot afford to purchase that extra seat or seats will opt to drive to their destinations. Under the guise of economic hardship, the FAA sees a public flocking to the highways for an inexpensive way to travel.

The FAA's position was based on a study by Apogee Research which pointed out that statistically, travelers are more likely to be injured in an automobile than in an airplane. This bizarre logic infuriated proponents of child restraint seats -- AFA included. In 1995, AFA

commissioned our own study to look more closely into this assertion. Our study, conducted by Darryl Jenkins, a visiting scholar at the International Institute of Tourism Research at the George Washington University, refutes the findings of the Apogee study.

In response to FAA's position, AFA's study found five key shortcomings in FAA's modeling assumptions:

1) Lack of key data to determine price sensitivity;

2) The use of an industry demand curve that unrealistically simplifies a complex situation;

3) A failure to take into account the price competition generated by low-fare carriers;

4) A failure to take into account the effects of income sensitivity.

5) A failure to correctly measure cross elasticity of demand.

Our study found no valid evidence to support the notion that travelers will be diverted from airplane travel to highways due to a requirement to use child restraint seats. Rather, our study showed that the assumptions used in the study cited by the FAA are unrealistic and have little or no relation to the aviation industry as it now exists. It fails to take into account that a whole new generation of air travel has developed to compete directly with the automobile. FAA's entire position rests on the unproved assumption that airlines do not compete with automobiles. It also ignored the new entrants in the aviation market -- low-cost carriers, whose main goal is to compete directly with the automobile.

By its own admission, the Department of Transportation found in 1993 that low-cost carriers were dominating air travel in most of the nation's largest markets. The FAA's study did not take

into account the growth and expansion of these low-cost carriers. By ignoring this market segment, the FAA's research is fatally flawed -- their assumptions incorrect.

In fact, during the 1995 FAA Forecasting Conference in Washington, D.C., the FAA proudly stated that its data showed that competition drove down airfare prices by eight percent in 1994. In addition, the FAA demographics showed that in the future, the primary airline travelers will include middle American families. Even the FAA believes that lower prices due to competition will make flying more attractive to families.

Today's families are consistently making the choice to fly rather than to drive -- and the airlines are responding to that demand for low-cost alternatives to the automobile. By maintaining lower fares, these carriers are attracting families to air travel, not diverting them to the roads. With more families flying, the need for child restraint seats is increasing every day.

Competition has consistently pushed airline prices down. Families are not forced to drive -- the market is making air travel cost effective for families -- just the opposite of the FAA's conclusions. Afterall, a family who chooses to drive will need to add to travel expenses the cost of paying for food, motels, gas and sundries...not to mention the added vacation time. All along, AFA has believed that few carriers will jeopardize losing a family of four because the family cannot afford the fourth seat. It is hard to imagine that the carriers would not act swiftly to offer some type of reduced fares for these seats. Presently, many carriers offer kid's fares for children over two during summer months. While I cannot speak for the airlines, AFA looks forward to "family friendly" fares from the carriers. Some carriers, like Southwest Airlines, already offer

discount programs for children under two in child restraint seats. These programs have been extremely successful.

AFA also found that the Apogee Study was inherently flawed in its economic analysis. The correct measure to use when measuring if people would drive if airline prices go up is "cross elasticity of demand." The FAA in its analysis did not use cross elasticity but "own price elasticity." Cross elasticity measures what happens to sales of one product when the price of a substitute good, like airplanes and cars, changes. Cross elasticity measures how many people would drive if the price of airline tickets changes. Own price elasticity of demand measures how many people would stop flying if airline ticket prices increased. You simply cannot make any inferences of what people will do other than not to fly when using own price elasticity. Cross elasticity is therefore the only correct and accurate measure to use.

AFA's study concluded that there are no valid economic reasons to believe that the FAA conclusions have a basis in fact. Therefore, the contention that requiring restraints for children under age two would result in greater death or injury is unsupported.

Another line of reasoning used in the past by the FAA to oppose mandating child restraint seats is that some of the seats are not acceptable for use. However, in studies conducted over the last four years, the Civil Aeromedical Institute (CAMI) has identified four forward-facing child restraint seats that do perform acceptably well. Furthermore, **all** rear-facing seats for children under 20 pounds performed well in these tests. It is important to note that the CAMI study focussed on airline crashes and not turbulence. In turbulence, being secured in a seat clearly can

save children from injury. Study into the use and design of child restraint seats is ongoing, but even the FAA would agree, being restrained is the only safe way for little children to fly.

In CAMI's 1993 study, it found that backless booster seats, harnesses and vests did expose children to the potential of serious abdominal and back injuries. Despite this result it took the FAA three years to issue a rule banning these devices. Early this June, the FAA issued a final rule to ban the use of these devises aboard all U.S. air carriers. Unfortunately, the agency did not totally ban the devices. Although these devices are clearly a hazard, the FAA only withdrew its approval during take-off, landing and movement on the surface. If the devices are unsafe, why allow them during segments of the flight? This rule is confusing for passengers and flight attendants. The rule should have banned them completely. Rather than fix the problem, the FAA has managed, unnecessarily, to create a more confusing and chaotic situation among airlines and passengers.

Often, flight attendants are forced to act as arbiters in explaining and enforcing an airline's policy as it relates to FAA regulations. Passengers remain confused and tempers flare. If this rule had been on the mark, it would have been a step in the right direction in identifying devices which pose a threat to infants and small children.

Additionally, a total mandate would reduce the current frustration levels of concerned parents and provide flight attendants with clear-cut guidelines to enforce FAA policy and assure all passengers are flying safely. It would also, we believe, solve the latest problem we are observing of "over-aged" lap children. Every day, flight attendants are faced with the dilemma of children

over two years of age sitting on their parents' lap. Although a clear violation of current federal regulations, carriers are looking the other way to avoid a conflict with passengers. An over aged lap child was one of the victims in the recent Valujet crash. A complete and clear ruling requiring seats for all passengers would rectify this problem and ensure that all passengers are flying safely.

Representative Lightfoot's bill, H.R. 1309, would require the use of child safety restraints for children under two on commercial aircraft. It would require that the Secretary of the Department of Transportation, no later than 90 days after enactment, would issue regulations that would secure our youngest traveler. It is simple and it will save children from injuries and death.

AFA's message is clear and straightforward on this bill. Our message is valid and unwavering. There is a safe way for little children and infants to fly and an unsafe way to fly. The safe way to fly is to be restrained and protected in an approved child restraint seat. All we ask is that Congress give us the tools to do our safety responsibilities, including requiring a seat for every passenger. It is time the FAA stops spinning its wheels on impractical ideas like retrofitting overhead bins to hold infants and focus on the issue of mandating child restraint seats for all children under two years of age. It is time the FAA begins its much promised education campaign. For over two years, the FAA has promised a comprehensive campaign to educate parents on the need to buckle up their youngest children. No program has begun yet. Additionally, the FAA must fix the latest federal regulation to totally ban boosters, harnesses and vests.

The Association of Flight Attendant urges this subcommittee and Congress to move H.R. 1309 forward in order to protect all aviation travelers. Thank you for this opportunity to testify today. I would be happy to answer any questions you may have.

ASSOCIATION OF FLIGHT ATTENDANTS AFL-CIO
1625 Massachusetts Avenue, NW, Washington, DC 20036-2212
PHONE 202•328•5400 FAX 202•328•5424

Statement of International President Association of Flight Attendants, AFL-CIO for Press Conference March 5, 1997 2:00 P.M. Introduction of Child Restraint Seat Legislation

Good afternoon. On behalf of the 40,000 flight attendants at the Association of Flight Attendants, I am pleased to support the efforts of Senator Murray and Representatives DeFazio and Shays as they introduce legislation to mandate the use of child restraint seats on aircraft. This legislation will create one level of safety for all passengers in the aircraft cabin.

For ten years, AFA has been a strong advocate of mandatory child restraint seats. The National Transportation Safety Board first recommended the use of such restraints in 1989 and again in 1994 when lap-held children perished in separate accidents. Earlier this year, AFA participated in a working group of the White House Commission on Aviation Safety and Security. That committee recognized the need to mandate the use of child restraint seats and included their recommendation in the final report to the President. Vice President Gore and the Commission can now be added to the growing list of advocates for child restraint seats, which includes labor groups, child safety coalitions and government agencies.

Every working day, flight attendants witness the dangers lap-held children are exposed to during takeoff and landing and during turbulence incidents. By mandating the use of child restraint seats, we are insuring that infants and small children will receive the same protection as all others on the plane.

AFA wholeheartedly supports the efforts of Senator Murray and Congressmen DeFazio and Shays. With this legislation, infants and small children under 40 pounds will receive the same level of protection as adults in the airplane cabin.

The members of the Association of Flight Attendants thank each of you for taking this important step toward improving aviation safety.

- USA Today, 10-31-96

FAA may allow air bags on planes

By Donna Rosato
USA TODAY

Even as automobile air bags come under fire for killing children and small women, the Federal Aviation Administration is considering a proposal to install air bags for bulkhead seats on 30-seat turboprops.

Jetstream Aircraft wants to use air bags for its J41 to meet the FAA's head-injury prevention standard. The rule is aimed at protecting fliers in emergency landings.

It applies to aircraft designed and built after 1988. Row seats met the standard but jetmakers found that bulkhead seats, which face a wall, didn't.

"In an otherwise survivable accident, you don't want someone to get a serious injury or die from hitting their head," FAA spokesman Tim Pile says.

Aircraft makers were given temporary exemptions while they sought a solution. Some installed shoulder harnesses. Others, like Boeing for the 777, put more space between the seat and the bulkhead so a passenger's head wouldn't hit the wall in a crash.

Jetstream says it would cost $30,000 to install air bags in front of the three bulkhead seats on the J41. Two airlines that fly J41s, Atlantic Coast and Trans States, say they will do whatever the FAA orders.

The FAA says the air bag must meet certain conditions. It shouldn't trigger accidently nor impede an evacuation.

The airplane air bag works like an auto air bag, but it is smaller, shaped like a V instead of a round pillow, and deploys two to four times slower.

Bulkhead air bags shouldn't pose the same hazard to children as auto air bags because they won't pop out far enough to hit a child, says Don Townsend, president of Simula, which makes the bag.

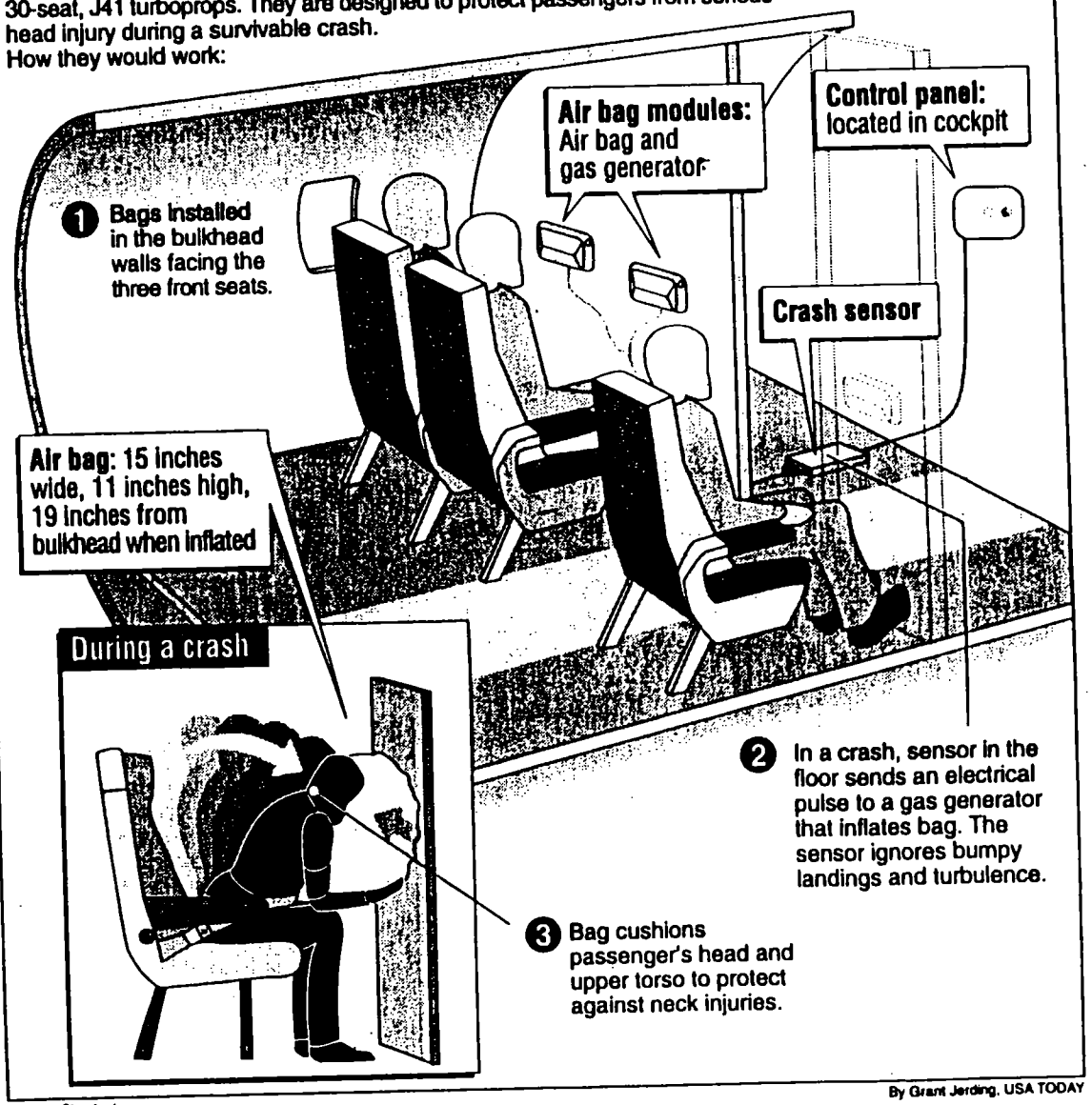
Still, children will likely be banned from sitting in those seats, even though they are popular with parents who like the extra room when traveling with kids, he says.

If the FAA approves the air-bag system, Jetstream will start installing them on new aircraft next summer.

▶ How bag works, 2B

Air bags for airlines

Jetstream Aircraft has proposed installing air bags for bulkhead seats on its 30-seat, J41 turboprops. They are designed to protect passengers from serious head injury during a survivable crash.
How they would work:



Source: Simula, Inc.

By Grant Jerding, USA TODAY

Tips for Safe Air Travel with Children

Proper use of an approved child restraint system (CRS) on an aircraft enhances child safety in the event of turbulence or an accident. The Federal Aviation Administration (FAA) strongly recommends that all children who fly, regardless of their age, use the appropriate restraint based on their size and weight.

Before You Fly:

- Ensure that your CRS has received FAA approval. Check for a label reading, "This restraint is certified for use in motor vehicles and aircraft."
- Check the width of your CRS. While airline seats vary in width, a CRS no wider than 16" should fit in most coach seats. Even if the armrests are moved out of the way, a CRS wider than 16" is unlikely to fit properly into the frame of the aircraft seat.
- Ask the airline if they offer a discounted fare for a child traveling in a CRS. Purchasing an airline ticket (discounted or full fare) for your child is the only way to guarantee that you will be able to use a CRS.
- Check with the airline to determine their busiest days and times. By avoiding these times, you are more likely to be on a flight with an empty seat next to you. In many cases, airlines will allow you to seat your child under two years of age in your CRS in the empty airplane seat without having to pay the airline fare for the child. Be sure to ask your airline for its policy regarding an empty seat.
- If you purchase a ticket for your child, reserve adjoining seats. A CRS must be placed in a window seat so it will not block the escape path in an emergency. A CRS may not be placed in an exit row.
- If you need to change planes to make a connecting flight, it can be very challenging to transport a CRS, a child, and luggage through a busy airport. Most airlines will help parents make the connection if they can arrange for assistance in advance.

Choosing The Correct CRS:

Always follow the manufacturer's instructions regarding use of the CRS. Do not place a child in a CRS designed for a smaller child. Be sure that shoulder straps come out of the CRS seat back above the child's shoulders. Fasten the aircraft seat belt around the CRS as tightly as possible.

The FAA recommends that a child weighing:

- *under 20 pounds* be placed in a rear-facing CRS.
- *from 20 to 40 pounds* use a forward-facing child restraint. Although the safety technology of forward-facing child restraint systems in aircraft is still developing, current restraints offer dramatic improvements in protection compared to lap-held or unrestrained children.
- *over 40 pounds* may safely use an aircraft seat belt.

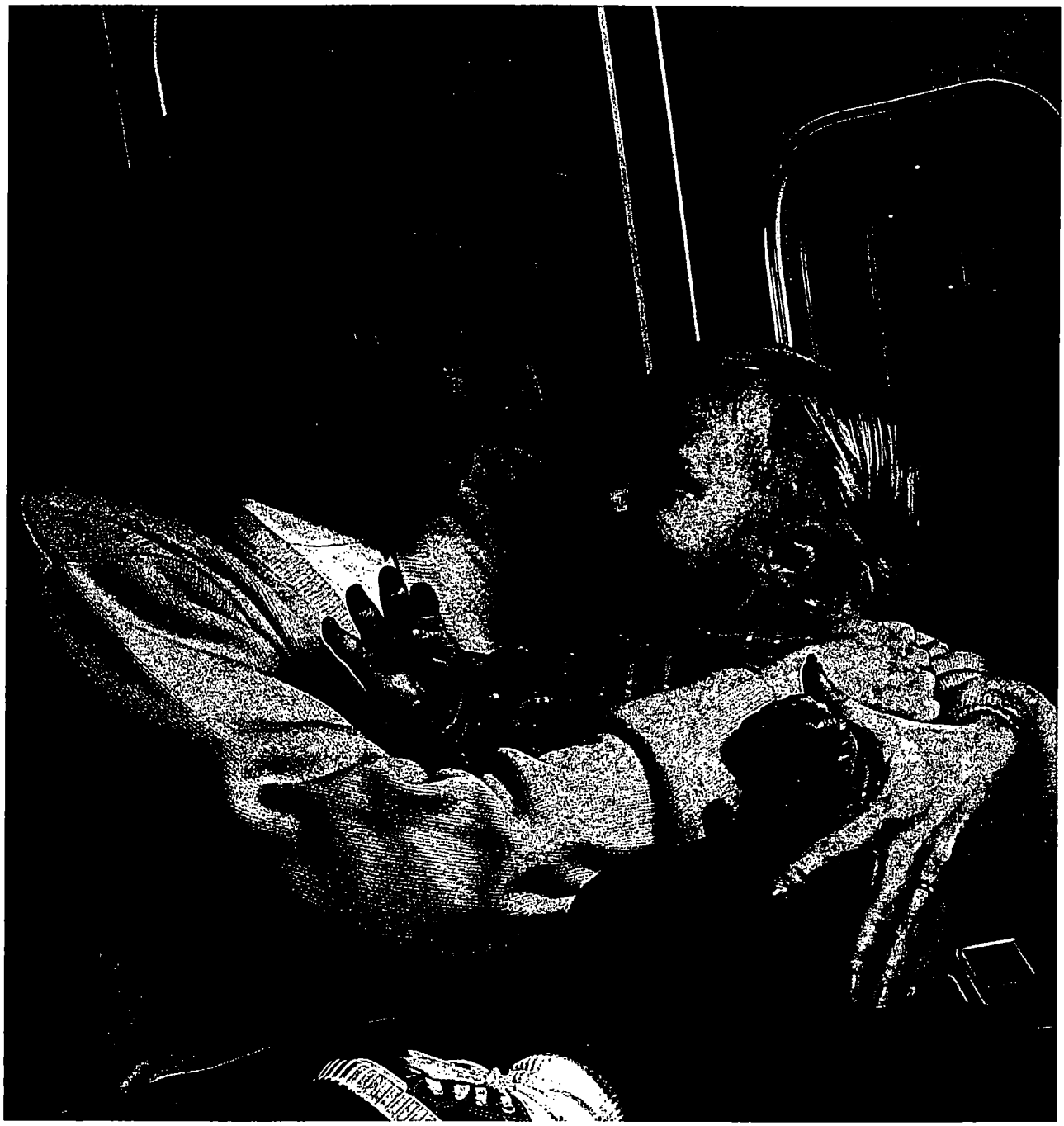
Reminders:

- Use an approved CRS when traveling to and from the airport, and when you arrive at your destination.
- While booster seats and harness vests enhance safety in automobiles, they are banned for use on aircraft. These devices may be checked as baggage.
- In the United States, supplemental lap restraints, "belly belts," are banned from use in both automobiles and aircraft.

For more information, call 1-800-FAA-SURE or access the FAA web site at http://www.faa.gov

U.S. Department of Transportation
Federal Aviation Administration

TURBULENCE happens.



If There's Turbulence, Even The Most Loving Arms Can't Hold Him.

You make sure your carry-on bag fits overhead. You tuck your purse under the seat in front of you. You secure your seat backs and tray tables in their upright position. Doesn't your *child* deserve the same protection? If there's unexpected turbulence during a flight, a **child safety seat** is the safest and most secure place for your little one. To learn more about safe air travel with children, call 1-800-FAA-SURE.

U.S. Department of Transportation
Federal Aviation Administration

TURBULENCE happens.

7" x 10" magazine ad (133 lpi)

FAA Bans Some Devices For Children on Aircraft

6/5/96

Associated Press

Infants and toddlers will no longer be permitted to use booster seats or harness- and vest-type restraints in airplanes.

The ban, effective in 90 days, was announced yesterday by the Federal Aviation Administration.

The agency said youngsters should use approved front- or rear-facing child seats instead. Parents would still be allowed to hold children under age 2 in their laps, however. Federal rules require children age 2 and older to sit in their own passenger seat.

First proposed last year, the ban on vest harnesses and booster seats follows testing by the FAA's Civil Aeromedical Institute in Oklahoma City.

The tests showed these types of restraints do not provide adequate protection for infants and toddlers during takeoff, landing and while aircraft move on the ground, the FAA said.

The booster seats elevate children without providing side or back protection and in some cases have no built-in belts to protect the children. Vest and harness restraints do not have a rigid platform, leaving the child free to contact dangerous objects, the agency said.

The FAA recommends that all children flying in airplanes be protected by an approved child restraint. Children under 20 pounds should be restrained in a rear-facing seat, those between 20 and 40 pounds in a forward-facing seat and those over 40 pounds by a standard airline lap belt, the FAA said.

Child restraint seats are certified by the National Highway Traffic Safety Administration.

FAA News

Washington, D.C.

FOR IMMEDIATE RELEASE
APA 93-96
Tuesday, June 4, 1996
Contact: Alison Duquette
Tel.: (202) 267-8521

FAA BANS THE USE OF BOOSTER SEATS, AND HARNESS AND VEST CHILD RESTRAINTS ABOARD AIRCRAFT

The Federal Aviation Administration (FAA) today issued a final rule to ban the use of booster seats, as well as harness and vest-type child restraint systems (CRS) aboard all U.S. air carriers.

Tests conducted by the FAA's Civil Aeromedical Institute (CAMI) in Oklahoma City have shown that these types of restraints do not provide adequate protection for infants and toddlers during aircraft takeoff, landing and while aircraft move on the ground.

The CAMI tests concluded that booster seats elevate children without providing a side or back protective shell and, in some cases, provide no integral belts to help restrain the child. Vest and harness restraints do not attach to any type of rigid shell or platform and leave the child free to come in contact with injurious objects.

"Aviation is absolutely the safest way for families to travel," said FAA Deputy Administrator Linda Hall Daschle. "The FAA's goal is to enhance air safety for children by educating families and promoting the use of the most effective child restraint systems that are approved for aircraft."

The FAA strongly recommends that all children who fly, regardless of their age, be protected by an approved CRS that is appropriate to the child's size and weight. The FAA has tested several types of child restraints at CAMI. Based on those tests, the FAA recommends that:

- ☐ children under 20 pounds should be restrained in an approved rear-facing CRS;
- ☐ children weighing 20-40 pounds should use an approved forward-facing CRS;
- ☐ children weighing over 40 pounds should use the standard lap belt that is attached to all airline seats.

Current airline policies do not require parents to purchase a separate seat for a child under two years old. Federal Aviation Regulations require children who are two years old or older to sit in their own separate passenger seat. The FAA recommends that passengers keep their seat belt securely fastened at all times.

The rule, proposed in June 1995, will take effect 90 days after publication in the Federal Register. A companion rule was also announced today by the National Highway Traffic Safety Administration (NHTSA), which is responsible for developing design standards used by CRS manufacturers and for approving them for both automobile and aviation use. NHTSA's rule complements the FAA rule by requiring manufacturers to label booster seats, and harness and vest restraints as "not certified" for use in aircraft. An "approved" CRS will have a label that reads "This restraint is certified for use in motor

vehicles and aircraft."

For a complete list of FAA safety recommendations for air travel with children, please call the agency's consumer information hotline at 1-800-FAA-SURE.

An electronic version of this release can be obtained via the World Wide Web at:
http://www.faa.gov

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Statement of the Honorable Jim Lightfoot
Child Safety Restraints Systems on Airlines
August 1, 1996

Mr. Chairman, thank you for the opportunity to appear today before the House Aviation Subcommittee in support of H.R. 1309, legislation I have authored requiring children under the age of two to be restrained while in flight. I am joined this morning by the Tourtellotte family of Clifton, Virginia, who, in early July, were passengers on Delta Flight 1288, when the engine exploded on takeoff killing two people. I think it's important the Subcommittee hear from the Tourtellotte family about how a child seat saved their daughter when the aircraft engine exploded sending shrapnel into the passenger compartment. In the interests of time, at this point I would like to submit my full statement for the record and briefly summarize my remarks.

I deeply appreciate the Subcommittee's taking time out of its busy schedule to reexamine this issue. As you know, the Subcommittee reviewed this matter six years ago -- almost to the day-- and I believe there are a number of new facts which have come to light justifying another hearing on this matter.

The Most Vulnerable Passenger -- the Least Protected Passenger

Current regulations give our children less protection than our luggage. I believe this is inconsistent with Federal Air Regulations which charge the Secretary of Transportation with "assigning and maintaining safety as the highest priority in air commerce."

I first became involved in this issue in 1989 after the United Airlines crash in Sioux City, Iowa, which claimed the life of a toddler who might have been saved had he been restrained. Sadly, the Avianca crash in New York followed upon Sioux City, with seven children injured - one of whom died. In 1994, a baby girl was thrown from her mother's lap in the US Air crash in Charlotte, NC, and died. In both cases the mothers survived because the FAA insists that they be restrained while in flight. Both were instances where the National Transportation Safety Board determined a child safety seat would have saved the child's life.

Airline crashes are not the only occasion where child safety seats can protect infants. There are also numerous cases of sudden clear air turbulence throwing children seated in their parents' laps into the air. One American Airlines flight from Miami to San Francisco encountered turbulence so severe that 26 people were injured. Among those injured -- two toddlers thrown from their parent's lap. Perhaps the saddest turbulence accident was a flight that experienced severe turbulence on approach to San Juan. The only injury -- a skull fracture to a seven week old lap child.

FAA's Opposition is Based on Dubious Assumptions

In 1993, Representative Jolene Unsoeld joined me in offering my child safety seat bill as an amendment during floor consideration of FAA reauthorization legislation. Our amendment was supported by the NTSB, the Association of Flight Attendants, the Airline Pilots Association and the Air Transport Association. Who opposed our amendment? Sadly, the Federal Aviation Administration.

Mr. Chairman, the FAA continues to oppose this legislation based on, I believe questionable studies which essentially conclude that mandating infants be restrained while in flight would, in fact, cost more lives than it would save. I believe that argument, and how the FAA supports it, through a series of studies of dubious worth, is the essential issue that I hope the Subcommittee will examine today.

I am offended by the notion that requiring infants to be restrained in flight does not save enough lives. I hope the Subcommittee will ask the FAA to provide Congress today with a list of how many lives have been saved recently by requiring air carriers to carry life rafts and life vests. The answer, to my knowledge, is zero. Applying the FAA's twisted cost benefit logic from child safety seats to other equipment we see that we can eliminate other safety equipment.

In 1990, the FAA appeared before this Subcommittee with its first study, performed on a contract basis by Apogee Research, Inc. The study concluded that required use of child safety seats would cost more lives than it saved. The FAA sprung the study on the Subcommittee that morning with no chance for advance review. For the record we asked the NTSB to review the FAA study. In their response to the Committee the NTSB concluded:

"The Board found several errors in the study's analysis of fatalities and injuries to children under two years old who are permitted to be held in the laps of an adult was in aviation accidents and incidents; probably because it was prepared by persons who had no knowledge of aircraft crashworthiness, kinematics and injury mechanisms. Thus the study's basic assumptions, which are based interpretations of accidents, must be viewed with skepticism."

The Board went on to say:

"Thus, the Safety Board believes that the sample of accidents examined by Apogee was not a valid sample to demonstrate the effectiveness of child safety seats."

Mr. Chairman, I would note the credibility of the Safety Board's view of the 1990 and subsequent 1993 Apogee study were at least partially confirmed in 1994 during a panel discussion convened by the FAA. The panel noted that Apogee's assumptions on automobile infant fatality rate in cars were wrong. Obviously, that kind of error will have dramatic effects on the conclusions reached by any study.

Lies, Damned Lies and Statistics

In response to Public Law 103-305, in May 1995, the Department of Transportation released a two volume study entitled "Child Restraint Systems." Not surprisingly, the study continues to endorse the FAA's misguided position.

Having learned my lesson at our 1990 Aviation Subcommittee hearing, this year, as part of the FY97 transportation appropriations hearing process, I asked the NTSB to review this latest DOT report. For the record, I would like to include the entire NTSB response to my request. The NTSB review of the study concluded:

"Consequently, the Safety Board believes that the FAA's projected costs to air travellers, revenue losses to airlines and passenger diversions to automobiles as a result of mandated child restraint systems for infants are based upon incomplete analysis."

The NTSB view is seconded by noted transportation expert Darryl Jenkins, who has concluded the DOT's latest study has reached the wrong conclusions about the use of child safety seats because FAA's lack of understanding of the aviation industry led to the use of the wrong statistical measurements in determining whether families would switch to automobiles.

Mr. Chairman, I think it's instructive to read through the latest DOT report. What strikes me in reading the report is the fact the organization which told the world it was safe to fly Valujet has now, in order to justify its position, expanded its legendary expertise into the world of airline pricing. Never mind the fact the airlines supported my bill in 1990 and when I offered it as a floor amendment in 1993.

The DOT offers an impressive economic model in attempt to support its position. However, like leasing a car, you need to read the fine print. For example, the report states:

"Also, most information and data used for the quantitative analysis were gathered from previous government and academic research. Because researchers from different topic areas produced the information, it sometimes had to be modified to fit the specific needs of this project. Occasionally, the data and information were incomplete and had to be extrapolated to meet the needs of this study."

I think the qualifications included in this report give new meaning to the old line that there are "lies, damned lies and statistics."

Further, Mr. Chairman, there are other views on this issue which lead us in another direction. At the end of my statement I would also like to enter into the record a report commissioned by the Association of Flight Attendants entitled: "A Reexamination of Economic Arguments on requiring Restraints for Children Under Age Two In Commercial Aircraft." The report draws these critical conclusions:

"There are no valid economic reasons to believe the conclusions drawn by the FAA have a basis in fact. Therefore, the contention that requiring restraints for children age two would result in greater death or injury is unsupported. The arguments used by those who support this policy fail to take into account the low cost carriers and their importance in short-haul traffic. Therefore, it cannot be argued that a child restraint requirement would prompt adults with infants to fly rather than drive."

The Market Will Adapt

Mr. Chairman, as the ranking member of the full committee Mr. Oberstar once noted, this is such a seemingly straightforward issue which has developed into a very convoluted one. Let me leave you with just a few basic thoughts.

First, I think every passenger on an airplane deserves the same level of protection. The FAA can say whatever it wants but the simple fact remains that current regulations afford passengers two different levels of safety. It's not right that luggage and pets have to be safely secured but our children do not.

Second, the FAA has offered us nothing more than a series of studies, which, as they are discredited, are simply replaced by new ones reaching the same conclusions. The Valujet crash showed us many things, one of which is the fact the FAA does not understand the effects of the low cost carriers on the airline market -- yet the FAA asks Congress to accept the results of studies based on the FAA's understanding of the airline industry.

Third, I have great faith that when Congress makes the policy decision that all passengers deserve the same level of airline protection -- the market will adjust. Innovative solutions are on the way. For example, Mr. Thomas Bennington, who will appear before the Subcommittee later this morning, is proceeding to the testing phase of a child safety seat which fits in front of the passenger. It may or may not be the solution, but the airlines are not going to risk losing billions of dollars worth of family travel business. And let's ask the FAA, the new expert in aviation demographics, one question: How many families stop flying once their child turns two?

Quite frankly, how many more children must die, how many more have to be hurt, before we reach the threshold of FAA's ghoulish cost/benefit ratio?

Conclusion

Mr. Chairman, this is likely the last time I will appear before this Subcommittee as a member of this House. I have been proud to be a member of this Subcommittee, and I have greatly enjoyed our work together in this session toward FAA reform. This Subcommittee has a great tradition of demanding more in terms of safety from the FAA than sometimes it was prepared to give.

The travelling public takes for granted floor level lighting, protective breathing devices, smoke detectors and collision alert and avoidance systems. But I know who pushed those things first and it was this Subcommittee. So let me thank you again for holding this hearing and urge you to take the lead one more time by closing another loophole in aviation safety.

Questions for the Record
from Mr. Lightfoot

Mr. Lightfoot. Last year the FAA once again failed to act on an urgent NTSB recommendation, the mandated use of child safety seats on aircraft. During last year's hearing, I requested NTSB provide to the Subcommittee an analysis of FAA's latest work on this subject, "Report to Congress, Child Restraint Systems," May 1995. For the record, would NTSB please provide the Subcommittee with this analysis.

[The information follows:]

On June 7, 1995, the FAA released a two-volume report to Congress entitled "Child Restraint Systems" (CRS). The Safety Board recognizes that the FAA expended considerable time and resources to develop this report, which concluded that mandating CRS on air carrier flights could result in some passenger diversions to automobiles, resulting in a net decrease in safety.

The scenarios proposed by the FAA that result in passenger diversions to automobiles and a net safety reduction are based on the premise that substantially higher air fares for families traveling with children will create those diversions. These diversions are based on the FAA's elasticity estimates that characterize families traveling with children as being highly price sensitive.

Given the FAA's assumed price sensitivity for these travelers, the Safety Board believes that if airlines were to charge a substantial fare for infants who currently are traveling free, the initial reduction in air travel by families would result in a substantial revenue loss for airlines, causing them to incur the FAA study's revenue loss estimate of up to $6 billion over a 10-year period. However, the Safety Board is certain that the airlines will not let $6 billion worth of price-sensitive travelers shift to the automobile without a competitive response. Airlines could offer any number of innovations to keep the families flying, such as free seats for infants or group discounts. The FAA study recognizes this likelihood in a passage that states, "Air carriers are expected to charge for infants only with the possibility of minimal passenger diversions and no net loss of revenues. Those charges would occur during peak travel seasons [when the report predicts families are least

likely to switch to automobiles] and peak periods of the day. [Families] may be offered significant infant fare discounts or free infant passage during off-peak periods." (p. 7-1)

In testimony before the U.S. House of Representatives on July 20, 1990, the Vice President of Operations for the Air Transport Association stated that with regard to potential passenger diversion to automobiles, air carriers "rather than risk the loss of one or more adult fares or perhaps an entire family unit, will offer a fare arrangement acceptable even for families traveling with infants who previously would have flown free."

The airlines are likely to permanently impose higher fares for infants only if they discover that the families traveling with infants are less price sensitive in practice than anticipated by the FAA. In that event, again, there would be limited diversion of passengers to automobiles and the added risk of automobile accidents.

The Safety Board notes that the FAA study selected what it labeled "Scenario Number 4" as the CRS option that prevented the most injuries and fatalities, with the least economic impact to air carriers. The study describes this scenario as one in which a family could reserve a seat for an infant traveler on a space-available basis, providing their own CRS. The Safety Board observes that this scenario is functionally identical to the current situation, in which airlines permit families to secure CRS on empty seats, when available. Thus, Scenario 4 would result in no net safety improvement.

Consequently, the Safety Board believes that the FAA's projected costs to air travelers, revenue losses to airlines, and passenger diversions to automobiles as a result of mandated CRS for infants are based upon incomplete analysis.

The Safety Board also notes the FAA's intention to develop a nationwide public education campaign to promote the use of child restraints. The Board believes that this campaign is appropriate. The Safety Board does not, however, believe that education alone will result in the protection of infants and small children on airplanes. Education alone did not result in high usage of CRS in automobiles; consequently, all 50 States and the District of Columbia now have mandatory automobile child restraint laws. The Safety Board is pleased to learn that Secretary Peña has written to air carriers asking that they establish incentives that encourage parents to fly with properly restrained children; the discount fares offered by Southwest Airlines to children who use CRS are consistent with such efforts.

Safety Recommendation A-95-51 is classified "Open – Unacceptable Response."