

Court of Appeals of Texas,  
San Antonio.

**DAIMLERCHRYSLER CORPORATION, Appellant,**  
**v.**  
**Roger HILLHOUSE, As The Next Friend of Ashlee Hillhouse, A Minor;**  
**and Lise Hillhouse, Appellees.**

Dec. 22, 2004

**ON MOTION FOR RECONSIDERATION EN BANC**

Opinion by SANDEE BRYAN MARION, Justice.

In an opinion and judgment dated June 2, 2004, we reversed the trial court's judgment in favor of the appellees who were the plaintiffs below, and rendered a take-nothing judgment in favor of the appellant who was the defendant below. The appellees filed a motion for reconsideration en banc, which a majority of this court granted. We withdraw our opinion and judgment of June 2, 2004, and issue this opinion and judgment in their place.

This is an appeal from a jury verdict in favor of appellees, Roger Hillhouse, Individually and As the Next Friend of Ashlee Hillhouse, A Minor; and Lise Hillhouse (collectively the "plaintiffs"), for personal injuries Ashlee suffered when an air bag deployed following an automobile collision. The accident occurred when the minivan in which Ashlee was a passenger collided with another vehicle. The minivan was manufactured by appellant, DaimlerChrysler Corporation. In the underlying case, the plaintiffs asserted design defect and marketing defect claims against DaimlerChrysler. We affirm the trial court's judgment in favor of the plaintiffs.

**BACKGROUND**

At the time of the accident (August 1998), Ashlee was almost ten years old and a passenger in her family's 1994 Plymouth Voyager minivan.<sup>1</sup> The minivan had three rows of seats: the two front bucket seats, the middle-row seats, and seats in the rear of the van. At the time of the accident, Lise Hillhouse was the driver, Ashlee was seated in the front passenger seat, and her brother and sister were seated in the middle-row

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<sup>1</sup> The minivan was originally sold to another owner in April 1994. The plaintiffs purchased it as a used vehicle in December 1997.

seats. When Lise rear-ended another vehicle, the deployment of the passenger-side air bag injured Ashlee. No one else in the minivan was hurt.

The plaintiffs sued DaimlerChrysler, alleging the minivan was defective in both its design and marketing. The jury returned an affirmative finding on both the design defect and marketing defect claims, found DaimlerChrysler negligent, and returned a \$3.5 million verdict in favor of the plaintiffs. The jury also found Lise negligent and apportioned 70% responsibility to DaimlerChrysler and 30% to Lise. The trial court denied DaimlerChrysler's motion for judgment notwithstanding the verdict, but reduced the award of future medical expenses from \$500,000 to \$400,000.

On appeal, DaimlerChrysler challenges the sufficiency of the evidence on both claims and the amount of damages awarded for Ashlee's future medical expenses.

### **MARKETING DEFECT**

A marketing defect occurs when a defendant knows or should know of a potential risk of harm presented by the product but markets it without adequately warning of the danger or providing instructions for safe use. *Bristol-Myers Co. v. Gonzales*, 561 S.W.2d 801, 804 (Tex.1978); *Sims v. Washex Mach. Corp.*, 932 S.W.2d 559, 562 (Tex.App.-Houston [1st Dist.] 1995, no writ); *USX Corp. v. Salinas*, 818 S.W.2d 473, 482 (Tex.App.-San Antonio 1991, writ denied). Thus, even a product safely designed and manufactured may be unreasonably dangerous as marketed because of a lack of adequate warnings or instructions for safe use. *Joseph E. Seagram & Sons, Inc. v. McGuire*, 814 S.W.2d 385, 387 (Tex.1991). The focus is on whether the product's risks were reasonably foreseeable by the manufacturer at the time of manufacture, whether the lack of warnings or instructions created an unreasonable danger, and whether any warnings given were adequate. *Brown Forman Corp. v. Brune*, 893 S.W.2d 640, 644 (Tex.App.-Corpus Christi 1994, writ denied).

A marketing defect cause of action consists of five elements: (1) a risk of harm must exist that is inherent in the product or that may arise from the intended or reasonably anticipated use of the product; (2) the manufacturer must actually know or reasonably foresee the risk of harm at the time the product is marketed; (3) the product must possess a marketing defect; (4) the absence of the warning and/or instructions must render the product unreasonably dangerous to the ultimate user or consumer of the product; and (5) the failure to warn and/or instruct

must constitute a causative nexus in the product user's injury. *Sims*, 932 S.W.2d at 562; *USX Corp.*, 818 S.W.2d at 482-83.

Here, the minivan contained two warning labels: a label placed in the vehicle when it was marketed in 1994 and another label distributed to all owners in 1997. Rather than placing the 1997 label on top of the 1994 label, the two labels were positioned side by side in the minivan. During oral argument, plaintiffs' counsel asserted that the 1994 warning was inadequate. Counsel conceded that the 1997 warning on its own was not inadequate. The 1994 label read as follows:

BEING TOO CLOSE TO THE STEERING WHEEL OR INSTRUMENT PANEL DURING AIR BAG DEPLOYMENT COULD CAUSE SERIOUS INJURY. AIR BAGS NEED ROOM TO INFLATE. SIT BACK. COMFORTABLY EXTENDING YOUR ARMS TO REACH THE STEERING WHEEL OR INSTRUMENT PANEL.

Next to the 1994 label, was the 1997 warning label, which read as follows:

WARNING

DEATH OR SERIOUS INJURY CAN OCCUR

- CHILDREN 12 AND UNDER CAN BE KILLED BY THE AIR BAG
- THE BACK SEAT IS THE SAFEST PLACE FOR CHILDREN
- NEVER PUT A REAR-FACING CHILD SEAT IN THE FRONT
- SIT AS FAR BACK AS POSSIBLE FROM THE AIR BAG
- ALWAYS USE SEAT BELTS AND CHILD RESTRAINTS

A picture of a rearward-facing child seat with a line drawn through it appeared to the left of the bullet points.

### **Foreseeability**

In its first issue on appeal, DaimlerChrysler asserts the evidence is legally and factually insufficient to support a finding that a risk of harm to “properly belted and seated children” was reasonably foreseeable when the minivan was marketed in 1994.

A manufacturer is not liable for a failure to warn of dangers that were unforeseeable at the time the product was marketed. *USX Corp.*, 818

S.W.2d at 483. Therefore, the claimant must show that the manufacturer knew or should have known of the risks at the time of marketing. *Id.* Foreseeability is measured in terms of those dangers that are reasonable to anticipate, and the product supplier is held to the status of an expert and is assumed to possess knowledge of the latest scientific advances. *USX Corp.*, 818 S.W.2d at 484. A plaintiff may prove knowledge or foreseeability of danger in several ways, including: (1) evidence of similar accidents or other complaints; (2) presentation of post-accident warnings; (3) presentation of recall letters; (4) evidence of governmental standards; (5) expert testimony, lay testimony, or documentary evidence to show information about risks available to defendant; and (6) reliance on well-established presumptions. *Sims*, 932 S.W.2d at 562; *USX Corp.*, 818 S.W.2d at 484.

The following evidence supports a finding on foreseeability.<sup>2</sup> As early as the 1970's, there was concern within the automotive industry and by the government that air bags with enough power to stop an unbelted fiftieth-percentile male dummy during a thirty-mile-per-hour crash into a fixed barrier carried the risk of injuring the occupant during deployment of the air bag if the occupant was in the air bag's deployment zone. In 1990, the government proposed extending the automatic crash protection for passenger cars to light trucks (including minivans) beginning in the 1994 model year. While DaimlerChrysler supported the application of automatic restraint systems to light trucks, it disagreed with the timetable proposed by the National Highway Traffic Safety Administration ("NHTSA"). DaimlerChrysler responded to the government's proposal as follows:

... As for the transfer of passenger side airbag technology from cars to trucks, there is very little of that technology that may be transferred at this time or at any time before 1994.

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In our earlier discussion of the practicality of providing automatic crash protection for light truck vehicles, we pointed out that the automatic restraint systems now used or under development for passenger cars cannot simply be "transferred" to all of the many different vehicles characterized as light trucks. Our ... minivan/wagons ... are uniquely different from one another and from our fleet of front wheel drive, unibody passenger cars. Every "transfer" of an automatic restraint

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<sup>2</sup> In its first issue, DaimlerChrysler also complains that evidence developed after 1994 should not have been admitted to demonstrate the risk was foreseeable in 1994. We do not address this complaint because evidence developed before the minivan was marketed is sufficient to support a finding of foreseeability.

system will necessitate extensive design and development activity, and more importantly, thorough testing. Our problem lies in the fact that our engineering resources are already strained and our testing schedule is full as we work to meet the safety requirements ... already mandated or imminent....

In 1991, the NHSTA became concerned with the number of reported injuries to drivers during low-speed collisions, collisions that otherwise may not have resulted in injuries. By 1994, it was feasible to design an air bag with less energy that would result in fewer injuries.

We hold this evidence is sufficient to support a finding that in 1994 DaimlerChrysler knew or should have known or should have reasonably anticipated the risk of injury from a deploying air bag to an occupant in the front passenger seat, including properly restrained passengers.

### **Adequacy of 1994 Warning Label**

In issue four, DaimlerChrysler asserts the plaintiffs' marketing defect claim fails because (1) the evidence is legally and factually insufficient to prove its warnings were inadequate; (2) its warnings were adequate as a matter of law; and (3) even if its warnings were inadequate, the inadequacy was not the producing cause of Ashlee's injuries.

The adequacy of a warning is a question of fact for the jury. *Alm v. Aluminum Co. of America*, 717 S.W.2d 588, 592 (Tex.1986). The adequacy of the warning is defined in terms of the likelihood of its being noticed and its ability to be understood and to convey a sufficient indication of the risks involved. *Brown Forman*, 893 S.W.2d at 644. An adequate warning is one given in such form that (1) it could reasonably be expected to catch the attention of the reasonably prudent person in the circumstances of its use; and (2) its content is comprehensible to the product's average user and conveys a fair indication of the nature and extent of the danger, if any, and how to avoid it. *Stewart v. Transit Mix Concrete & Materials Co.*, 988 S.W.2d 252, 256 (Tex.App.-Texarkana 1998, pet. denied). A warning's adequacy depends upon the language used and the impression it is calculated to make upon the mind of the average user of the product. *Id.* An adequate warning also warns with that "degree of intensity" to cause a reasonable person to exercise care as the risk requires. *Bituminous Cas. Corp. v. Black & Decker Mfg. Co.*, 518 S.W.2d 868, 873 (Tex.App.-Dallas 1974, writ ref'd n.r.e.).

DaimlerChrysler presented an ergonomics expert, Alan Doris, who testified about the adequacy of the two labels. He stated that the 1994 label was appropriate and adequate, in 1994 there was no regulation

governing warning labels, and this label was comparable to labels used by other manufacturers. Doris opined that both the 1994 and 1997 labels fairly and reasonably identified the hazards and risks associated with air bags. He stated there was nothing about either label that made the air bags unreasonably dangerous. The labels were written in a form and manner and placed in a location where they were reasonably likely to be seen and understood, and to give a reasonably prudent person the information needed to behave safely with regard to air bags.

Doris testified that focus groups were used to test the 1994 label and there was an indication the label might be clearer with the use of pictures or “pictograms.” However, the government, after considering the suggestion, decided that some warnings did not lend themselves to pictures and too many pictures would result in a big label that might be even more confusing. In 1993, when the government was soliciting comments regarding warning labels, there were no comments from manufacturers or consumer groups about a need for a label that warned children age twelve and under could be injured or killed. Doris testified that in determining the adequacy of a warning, the perceptions of the consumer were important. The jury saw a DaimlerChrysler print ad, published in various magazines, that depicted a children's baseball team seated in a minivan, including children in the front seat. Doris admitted, “It [the ad] may give the perception that in 1996 there was no problem with that youngster riding in the front seat as long as they were following the rules.”

Lise testified she read both warning labels, but not the owner's manual. Lise testified that she understood the 1994 label to mean that an occupant would be safe if that person was sitting with their back straight up against the seat back, away from the instrument panel, and properly restrained. She said Ashlee was more than a child's arm's length from the instrument panel.<sup>3</sup>

The jury also heard testimony from Fred Daris, a DaimlerChrysler engineer, who said “from a father's standpoint and parent, I didn't see

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<sup>3</sup> DaimlerChrysler relies on *Sauder Custom Fabrication, Inc. v. Boyd*, 967 S.W.2d 349 (Tex.1998) for its assertion that Lise's own experiences and subjective knowledge are irrelevant to whether it satisfied its duty to warn of foreseeable risks. The issue in *Sauder* was “whether the obviousness of a risk is to be determined from the perspective of an average person or an average user of the product.” *Id.* at 349. The Court stated, “The court of appeals correctly noted that Boyd's own experience and subjective knowledge are irrelevant in determining whether Sauder had a duty to warn of the risk that a ring could fall.” *Id.* at 350 (emphasis added). Here, there is no dispute that DaimlerChrysler had a duty to warn; instead, the contested issues are whether its warning was adequate and whether any inadequacy was the producing cause of Ashlee's injuries.

any problem having my kids in the front seat.” Dale Dawkins, DaimlerChrysler's Director of Vehicle Compliance and Safety Affairs, testified his “understanding was that [the minivan] was a very safe vehicle, a very safe air bag system for a properly restrained child in the front seat[,]” and the van was promoted as such.

Ultimately the determination of whether a warning is adequate is a question of fact for the jury. See *Alm*, 717 S.W.2d at 592. Here, a jury might have reasonably concluded that neither the 1994 warning label placed in the vehicle when it was marketed, nor the 1997 label when read together with the 1994 label, “convey[ed] a fair indication of the nature and extent of the danger” posed by a deploying air bag to a properly restrained occupant who was sitting back in the seat, an arm's length or more from the instrument panel. We hold the evidence was sufficient to support a finding that the warning provided by DaimlerChrysler was not adequate.

### **CAUSATION**

Finally, DaimlerChrysler asserts there is no evidence “that a deficiency in the warning labels was the reason Ashlee Hillhouse was allowed to ride in the front seat, where she was exposed to the risk of serious injury that the air bag warning labels and owner's manual identified.”

Once a plaintiff proves that a manufacturer failed to provide adequate instructions or warnings, his producing cause burden is aided by a presumption that he would have read and heeded adequate warnings or instructions had they been provided. See *Magro v. Ragsdale Bros., Inc.*, 721 S.W.2d 832, 834 (Tex.1986). This presumption “excuses [a] plaintiff from the necessity of making self-serving assertions that he would have followed adequate instructions, simply to put the issue of causation in sufficient dispute to avoid summary judgment or directed verdict, and it assists plaintiffs in cases where the person injured has died and evidence of what he would have done is unavailable for that reason.” *General Motors Corp. v. Saenz*, 873 S.W.2d 353, 359 (Tex.1993).

However, the presumption is subject to rebuttal by the defendant. *Id.* “[T]he presumption that adequate warnings on products will be heeded places upon the defendant in a failure-to-warn case the burden of going forward with the evidence on causation. If ... [the] defendant offers evidence contrary to the presumption, then [the] plaintiff must prove causation by a preponderance of the evidence, and the presumption has no further legal consequence.” *Id.* When, as here, an inadequate warning is provided, the issue becomes whether despite the inadequacy of the warning or instructions, would following them have prevented the injury.

*Id.* If following an inadequate warning or instruction would have prevented the injury, then the inadequacy could not have caused the injury. *Saenz*, 873 S.W.2d at 359 n. 4; *Gillespie v. Century Prod. Co.*, 936 S.W.2d 50, 52 (Tex.App.-San Antonio 1996, no writ). “There is no presumption that a plaintiff who ignored instructions that would have kept him from injury would have followed better instructions.” *Saenz*, 873 S.W.2d at 359. On the other hand, if a claimant reads instructions or a warning in an effort to avoid injury and is confused or misled by the contents of the warning or instruction, “it is reasonable to presume that a clearer warning would have been to greater effect.” *Saenz*, 873 S.W.2d at 360.

Here, Lise is assisted by the presumption in her favor because she testified that she read both warning labels. Lise said she understood the one line in the 1997 label that stated, “CHILDREN 12 AND UNDER CAN BE KILLED BY THE AIR BAG.” However, after reading both labels together in their entirety, Lise understood that Ashlee would be safe in the front seat if she was properly restrained and sitting back in her seat.

DaimlerChrysler asserts that Lise's testimony about why she allowed Ashlee to ride in the front seat contradicts any claim that the label's inadequacy was the producing cause of Ashlee's injuries. Lise testified she did not agree that the back seat was the safest place for children; however, at this point she was referring specifically to the rear-most seat. Lise said her two youngest children sat in the middle-row seats in their carriers, leaving either the front seat or the rear-most seat for Ashlee. Lise said she was worried that if the van was hit from behind and caught on fire, she would not be able to get to Ashlee; and the front seat had an adjustable shoulder strap and headrest that the back seats did not have. As Ashlee got older, she wanted to sit up front, and Lise thought she was safe up front as long as she was in her shoulder harness and properly belted. Lise said that if she had been told by the salesman from whom they bought the minivan that air bags were dangerous to children, even children properly belted, she would not have seated any of her children in the front seat.

The jury also heard testimony from Lise about how she interpreted the two warning labels. For example, when asked how she interpreted the warning to never put a rear-facing child seat in the front, she stated, “It doesn't say anything about a front-facing child seat. I would take it to mean I can put a child-front-facing child in the front seat.” She would have expected the warning to include front-facing child seats if that position was also dangerous. Based on this interpretation, Lise believed a properly belted nine-year-old child could sit in the front seat.



In addition to Lise's testimony, the jury was able to consider her interpretation of the warning labels in the context of advertising by DaimlerChrysler. During the time Lise and her husband looked at minivans, she recalled seeing advertising about DaimlerChrysler vans. She said her perception, based on the advertising, was that minivans "were safe and that they were [a] good reliable safe vehicle for family and for children." The jury saw print ads stating that when DaimlerChrysler designed the minivan

[It] didn't start with a blank sheet of paper. We already had a very clear picture of why we build Grand Voyager. Children.... Their safety is important. That's why Grand Voyager's passengers are literally surrounded with safety. In front, there are dual air bags. ... All in all, Grand Voyager's thorough regard for children continues to keep us the favorite minivan of over two million parents and their five million offspring. [Emphasis added.]

This ad was placed in family-oriented and parenting magazines. Both Lise's understanding of the advertisement and the testimony of DaimlerChrysler's Director of Global Media indicated the advertising that stressed the minivan's design for safety meant the safety of children, and the advertising touting the presence of air bags meant the air bags were safe for children.

DaimlerChrysler also asserts that, even assuming a casual connection between the 1994 warning and Ashlee's injuries, the connection was broken by the 1997 warning label that Lise admitted reading. DaimlerChrysler relies on *Blackwell Burner Company, Inc. v. Cerda*, 644 S.W.2d 512, 516 (Tex.App.-San Antonio 1982, writ ref'd n.r.e.), for its contention that when a product user is actually aware of a product's dangers, even an inadequate warning cannot be the producing cause of the claimant's injuries. However, *Blackwell Burner*, unlike this case, was a strict liability case, in which assumption of the risk was a defense. Also, *Blackwell Burner* focused on the product user's knowledge or awareness of the danger or risk. Here, nothing in either label or the owner's manual indicated that any properly restrained occupant who was sitting back in the seat, an arm's length or more from the instrument panel would not have been safe in the front passenger seat.

The dissent states that "[t]he warnings provided reasonable notice of the dangers of air bags to young children. Had Lise acted in accordance with these warnings, which she says she understood yet disregarded, the injury to Ashlee would not have occurred." See op. at 557. These statements are an improper substitution of our conclusions for those of the jury. See *Pool v. Ford Motor Co.*, 715 S.W.2d 629, 634-35 (Tex.1986). It is not within this court's province to interfere with the jury's resolution

of conflicts in the evidence or to pass on the weight or credibility of the witnesses' testimony. See *Corpus Christi Area Teachers Credit Union v. Hernandez*, 814 S.W.2d 195, 197 (Tex.App.-San Antonio 1991, no writ). Nothing in either the 1994 label, the 1997 label, or the owner's manual<sup>4</sup> indicated that any properly restrained adolescent who was sitting back in the seat, an arm's length or more from the instrument panel would not have been safe in the front passenger seat. Accordingly, heeding the warning given in 1994-sit back, comfortably extending your arms to reach the steering wheel or instrument panel-would not have prevented Ashlee's injuries. The warnings provided in the 1997 label did not contradict the warnings or instructions contained in the 1994 label.

The jury reasonably could have believed that had Lise known of the risk, she would not have allowed Ashlee to sit in the front passenger seat. The jury reasonably could have found that DaimlerChrysler did not rebut the presumption that Lise would have followed adequate instructions. We hold the evidence is sufficient to support a finding on causation.

For these reasons, we conclude the evidence was sufficient to support the jury's verdict on plaintiffs' marketing defect claim.

### **DESIGN DEFECT**

The Civil Practice and Remedies Code prescribes two elements-a safer alternative design and producing cause-that must be proved, but are not alone sufficient, to establish liability for a defectively designed product. TEX. CIV. PRAC. & REM.CODE ANN. § 82.005(a) (Vernon 1997); see also *Hernandez v. Tokai Corp.*, 2 S.W.3d 251, 256 (Tex.1999). A claimant must not only meet the proof requirements of the statute but also must show, under the common law, that the product was defectively designed so as to be unreasonably dangerous, taking into consideration the utility of the product and the risks involved in its use. *Hernandez*, 2 S.W.3d at 257.

To establish their design defect claim, the plaintiffs had to show by a preponderance of the evidence that (1) there was a safer alternative design; (2) the safer alternative would have prevented or significantly reduced the risk of injury, without substantially impairing the product's utility; and (3) the safer alternative was both technologically and economically feasible when the product left the control of the manufacturer. TEX. CIV. PRAC. & REM.CODE ANN. § 82.005(a)-(b) (Vernon 1997); see also *General Motors Corp. v. Sanchez*, 997 S.W.2d 584, 588

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<sup>4</sup> Lise admitted she did not read the owner's manual; however, nothing in the manual or the 1994 warning label indicates that a child of Ashlee's size and age would not have been safe in the front passenger seat if properly seated and restrained.

(Tex.1999). If no evidence is offered that a safer design existed, the product is not unreasonably dangerous as a matter of law. *American Tobacco Co. v. Grinnell*, 951 S.W.2d 420, 433 (Tex.1997).

On appeal, the plaintiffs assert they suggested two safer alternative designs: (1) a passenger seat permanently fixed in the rear-most position, out of the “air bag danger zone,” and (2) a de-powered air bag. DaimlerChrysler is correct that the plaintiffs offered no evidence at trial on their first suggestion; nor was it mentioned in closing arguments. The only time a permanently fixed seat was mentioned is in plaintiffs' petition. Accordingly, we consider only whether the plaintiffs established that a de-powered air bag was a safer alternative. On appeal, the plaintiffs also assert that DaimlerChrysler did not dispute feasibility at trial. We agree. A review of the record indicates the trial court and the parties understood that DaimlerChrysler was not challenging either economic or technological feasibility. Therefore, the issue is further narrowed to whether the evidence is sufficient to support a finding that a de-powered air bag would have prevented or significantly reduced the risk of injury, without substantially impairing the product's utility. Under this test, the relevant risk of injury is the risk to the claimant and the relevant utility is to the intended users of the air bag. See *Hernandez*, 2 S.W.3d at 258. In other words, a plaintiff must establish that the alternative design not only would have reduced the risk of harm in the instant case, but also would not, “under other circumstances, impose an equal or greater risk of harm.” See *Uniroyal Goodrich Tire Co. v. Martinez*, 977 S.W.2d 328, 337 (Tex.1998). Thus, the plaintiffs here had to prove that a de-powered air bag would have prevented or significantly reduced the risk of Ashlee's injuries without substantially reducing the utility to all occupants of the front passenger seat.

Evidence in support of whether a de-powered air bag would have prevented or significantly reduced the risk of Ashlee's injuries

To establish the first prong of the risk/utility test, the plaintiffs relied upon the testimony of Dr. Joseph Burton, a medical forensic expert. Burton said if the energy of an air bag is decreased by altering the rise rate and the peak pressure, there would be fewer injuries. He also stated that the further an occupant is away from the air bag, the less the risk of injury. Burton said he was familiar with government tests and “other tests” of the de-powered air bag compared to the baseline air bag, but he did not specify which tests. He said that before April 1994 studies had been conducted on the types of injuries caused by “interaction” with air bags. When asked what affect a de-powered air bag would have had on Ashlee's injuries, Burton opined that Ashlee sustained her injuries because she “interacted” with the air bag before it was fully inflated, and she would not have sustained her injuries if she had not “interacted”

with the air bag when she did. Burton concluded that if the force of the air bag had been decreased by thirty percent, Ashlee's injury would be nonexistent or less severe. However, except to state Ashlee's injury would not be as severe, Burton did not specify the degree to which her injuries would have been reduced.

In its third issue on appeal, DaimlerChrysler contends Burton's testimony should not have been admitted on the issue of whether a de-powered air bag would have prevented Ashlee's injuries because his testimony failed the Robinson/Daubert requirements.<sup>5</sup> DaimlerChrysler objects to Burton's testimony on the grounds that it is unreliable and unsupported by any meaningful analysis. We agree.

A proponent of scientific expert testimony must demonstrate that the evidence is relevant and reliable before it can be admitted. *Gammill v. Jack Williams Chevrolet, Inc.*, 972 S.W.2d 713, 720 (Tex.1998); TEX.R. EVID. 702. Scientific evidence that "is not grounded 'in the methods and procedures of science' is no more than 'subjective belief or unsupported speculation.'" *Gammill*, 972 S.W.2d at 720. "Expert testimony must be supported by facts in evidence, not conjecture." *Marathon Corp. v. Pitzner*, 106 S.W.3d 724, 729 (Tex.2003). Among the factors a court may consider in determining whether evidence is admissible under Rule 702 are the following:

- (1) the extent to which the theory has been or can be tested;
- (2) the extent to which the technique relies upon the subjective interpretation of the expert;
- (3) whether the theory has been subjected to peer review and publication;
- (4) the technique's potential rate of error;

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<sup>5</sup> The plaintiffs assert DaimlerChrysler waived this complaint because it did not object at trial. A complaint about the reliability of scientific evidence is preserved when a party objects to the evidence either before trial or when the evidence is offered. *Maritime Overseas Corp. v. Ellis*, 971 S.W.2d 402, 409 (Tex.1998); *General Motors Corp. v. Iracheta*, 90 S.W.3d 725, 731 n. 6 (Tex.App.-San Antonio 2002, pet. filed). DaimlerChrysler preserved its complaint on appeal because it lodged its objection to Burton's testimony before trial. DaimlerChrysler complained, during a pretrial hearing, that Burton relied on testing involving out-of-position occupants and there is no evidence Ashlee was on or near the air bag module when the bag deployed; and Burton performed no tests himself nor could he point to any test performed showing the affect of a de-powered air bag on an injury similar to that suffered by Ashlee. DaimlerChrysler raises these same complaints on appeal. Therefore, DaimlerChrysler preserved its complaint.

(5) whether the underlying theory or technique has been generally accepted as valid by the relevant scientific community; and

(6) the non-judicial uses that have been made of the theory or technique.

*Id.*; *General Motors Corp. v. Harper*, 61 S.W.3d 118, 131 (Tex.App.-Eastland 2001, pet. denied).

In April before the trial, Burton met with the Hillhouse family to conduct a test using Ashlee's sister Lindsey as a surrogate for Ashlee, because Lindsey was about the same size at the time of trial as Ashlee at the time of the accident. In this test, he made the following assumptions: (1) Ashlee was wearing her seat belt and sitting with her shoulder towards the air bag and her head rotated to the right; (2) the front passenger seat was about three inches from the full rear position because that is where investigators hired by the plaintiffs thought the seat was positioned at the time of the accident; (3) Ashlee's head was anywhere from twelve to twenty inches from the air bag when she impacted with the bag; (4) Ashlee received her injury when the air bag was between sixty and eighty percent filled; and (5) Ashlee's upper torso probably moved forward until her shoulder belt locked up and "arrested" any further movement. Burton also assumed the test vehicle he used (a 1995 Dodge Caravan) was a similar vehicle type to the 1994 Plymouth Voyager involved in the accident, and the seats and seat belts in the two vehicles were the same. He made no assumptions about whether the air bag in the Dodge Caravan was the same as the air bag in the Plymouth Voyager. Burton measured the distance from the instrument panel to the seat back, but he did not make the same measurement with Lindsey in the front seat. To understand how far Lindsey would lean forward and how close she could get to the instrument panel, Burton held the seatbelt in place on Lindsey so that the belt could not release. Burton said he did no other tests in this case, other than the surrogate test with Lindsey. He performed no tests to investigate the characteristics of how the seat belt would lock up during deceleration and thus prevent the occupant's forward movement. Burton admitted he has testified, in the past, about countermeasures that could have been taken to mitigate or reduce the likelihood of injuries from air bags "only in a generic sense" because he is not a design engineer.

We hold that Burton's opinion was based on conjecture and his testimony was too speculative to have been presented to the jury. The only test Burton performed in this case was to use a similar vehicle with Ashlee's sister as a surrogate. His surrogate test was based on speculation: where the front seat was positioned, whether Ashlee was restrained by her seat belt, how and to what degree the seat belt locked her in upon deceleration, and her position when she impacted with the

air bag. His opinion on whether a de-powered air bag would have prevented or lessened Ashlee's injuries was also speculative: he did not specify a single test upon which he relied, other than Ted Zinke's (another plaintiffs' expert) subjective interpretations of sled tests performed in 1994 and 1995. For these reasons, we hold that Burton's testimony was unreliable. Therefore, the evidence was legally insufficient to support a finding that plaintiffs' alternative design would have prevented or significantly reduced the risk of Ashlee's injuries.

Evidence in support of whether de-powered air bag would not have substantially reduced the utility to the intended users of the product

To establish the second prong of the risk/utility test, the plaintiffs relied upon the testimony of Zinke and Burton, as well as a 1995 letter written by DaimlerChrysler to the NHTSA. Zinke stated that "for certain vehicles" it was feasible to design a less powerful air bag that would still protect people and not injure people. He testified about tests using a thirty percent de-powered air bag with occupants close to or on top of the air bag module. These tests showed a significant decrease in head injuries, but Zinke admitted that de-powering an air bag increased injuries in high speed collisions. Burton testified that de-powering reduces the potential for injury. In the 1995 letter to the NHTSA, DaimlerChrysler stated that reduction in inflation rates of air bags "would influence 80 percent or more" of inflation-induced injuries for occupants on or near the module. However, the term "influence" was not elaborated upon.

In its second issue, DaimlerChrysler asserts the evidence is legally and factually insufficient to support a finding that a de-powered air bag would not have substantially impaired the air bag's utility. Again, we agree. The plaintiffs presented no evidence from which the jury could reasonably have concluded that the number of injuries avoided or lives saved by adopting their alternative design would be greater than the corresponding number of injuries sustained or lives lost as a result of such adoption. Also, Zinke admitted that de-powering air bags increased injuries in high speed collisions. Thus, the evidence was legally insufficient to establish that a de-powered air bag would not, "under other circumstances, impose an equal or greater risk of harm." See *Uniroyal Goodrich Tire*, 977 S.W.2d at 337.

For these reasons, we conclude the evidence was legally insufficient to support the jury's verdict on plaintiffs' design defect claim and we sustain DaimlerChrysler's second and third issues on appeal.

#### **FUTURE MEDICAL EXPENSES**

The trial court reduced the jury's award of future medical expenses from \$500,000 to \$400,000.<sup>6</sup> In its fifth issue, DaimlerChrysler asserts the evidence is legally and factually insufficient to support an award of \$400,000 in future medical expenses. The award of future medical expenses lies within the discretion of the jury. *City of San Antonio v. Vela*, 762 S.W.2d 314, 321 (Tex.App.-San Antonio 1988, writ denied). To sustain an award of future medical expenses, the claimant must present evidence to establish, in all reasonable probability, that future medical care will be required and the reasonable cost of that care. *Rosenboom Mach. & Tool, Inc. v. Machala*, 995 S.W.2d 817, 828 (Tex.App.-Houston [1st Dist.] 1999, pet. denied); *Whole Foods Mkt. Southwest, L.P. v. Tijerina*, 979 S.W.2d 768, 781 (Tex.App.-Houston [14th Dist.] 1998, pet. denied). Although the preferred practice for establishing future medical costs is through expert medical testimony, there is no requirement that the claimant establish such costs through expert testimony. *Tijerina*, 979 S.W.2d at 781. Because no precise evidence is required, the jury may award such damages based upon the nature of the injury, the medical care rendered prior to trial, and the condition of the injured party at the time of trial. *Vela*, 762 S.W.2d at 321.

Ashlee's past medical expenses amounted to \$46,000. Both Lise and Ashlee's surgeon, Dr. Pederson, described the two, painful surgeries Ashlee endured. At the time of the accident, she had no function from her shoulder to her hand. After two surgeries, she has regained only about five percent of the function in her hand. Lise testified about the on-going physical therapy, which Pederson said Ashlee would need for at least another five to six years. Pederson testified that in one of the two surgeries he performed, he placed nerve tissue in Ashlee's arm that he hoped would grow. If the nerve tissue grew, he hoped in the future to transfer muscle from her legs to her arm to allow her to straighten and bend her fingers. He said there was an unlimited array of things that could be done for Ashlee in the future, but he said he would not force future surgeries on her because there would be additional scarring, and as a teenager, Ashlee may not want additional surgery. Pederson said if he performed the surgery today, it might cost about \$30,000.

Based on the nature of Ashlee's injury, her condition at trial, the need for future physical therapy, and the possibility of future surgeries, we hold the evidence was sufficient to support the \$400,000 award of future medical expenses.

## **CONCLUSION**

We affirm the trial court's judgment.

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<sup>6</sup> Plaintiffs do not challenge the trial court's reduction of the award.

Dissenting opinion by PAUL W. GREEN, Justice, joined by SARAH B. DUNCAN, Justice, and KAREN ANGELINI, Justice.

PAUL W. GREEN, Justice, dissenting on Motion for Reconsideration En Banc.

The majority's judgment is based on its holding that there is legally sufficient evidence that a marketing defect in DaimlerChrysler's product was a producing cause of the injuries to Ashlee Hillhouse. I respectfully dissent.

Lise Hillhouse testified she read and understood both the 1994 and 1997 air bag warning labels that specifically warned of the dangers of air bag deployment to children aged twelve and younger. Lise therefore knew that young children could be killed by the air bag, and she knew that the back seat was the safest place for children. But she did not agree with the manufacturer or its engineers. Instead, and in the face of the clear warnings and instructions, Lise believed Ashlee would be safe in the front seat if she was properly restrained and sitting back in her seat.

Lise explained that she disregarded the manufacturer's warnings and instructions because she put her two youngest children in the middle-row seats in their child-carriers, leaving either the front seat or the rear-most seat for Ashlee. The rear-most seat was not preferred for Ashlee because it was hard to talk to her when she was seated in the back of the minivan. Also, when the weather was hot, it took a long time for the air conditioning to cool down the back seat area. And she worried that if the minivan was hit from behind and caught fire, she would be unable to get to Ashlee. Lise chose the front seat for Ashlee because, as Ashlee got older, she wanted to sit up front. And, since the front seat had an adjustable shoulder strap and headrest that the back seats did not have, Lise thought Ashlee would be safe up front as long as she was in her shoulder harness and properly belted.

To arrive at the conclusion that Ashlee would be safe in the front seat as long as she wore her seatbelt, Lise had to reach two conclusions directly in conflict with the two child-specific warnings. First, she had to assume the warning that children could be killed by the air bag only applied if the child was not belted. Second, she had to disagree with the warning that the back seat is the safest place for children.

The warnings provided reasonable notice of the dangers of air bags to young children. Had Lise acted in accordance with these warnings, which she says she understood yet disregarded, the injury to Ashlee would not



have occurred.<sup>7</sup> That being so, plaintiffs failed as a matter of law to establish that any failure to warn was a producing cause of the plaintiffs' damages. See *General Motors Corp. v. Saenz*, 873 S.W.2d 353, 360-61 (Tex.1993); *Gillespie v. Century Prod. Co.*, 936 S.W.2d 50, 52 (Tex.App.-San Antonio 1996, no writ).

I would hold the evidence is legally insufficient to support the jury's verdict on plaintiffs' marketing defect claim and render judgment in DaimlerChrysler's favor.

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<sup>7</sup> Lise testified that if she had been told air bags were dangerous even to children properly belted, she would not have seated any of her children in the front seat. The jury apparently believed that if the warning had been more specific, Lise would have followed it. However, any warning may be made more detailed or more conspicuous. The pertinent question is whether the warning that was given, if followed, would have prevented the injury. See *General Motors Corp. v. Saenz*, 873 S.W.2d 353, 359 (Tex.1993).