Vol. 35 No. 4

For Everyone Concerned With the Safety of Flight

July-August 2000

Cabin Crews Must Capture Passengers' Attention in Predeparture Safety Briefings

Many civil aviation authorities assume that airlines know best how to attract passengers' attention, but some cabin safety specialists believe that creative methods improve attention to safety briefings before takeoff.

FSF Editorial Staff

A common finding of several studies of passengereducation methods is that cabin crews may face an overwhelming workload during an emergency if large numbers of passengers do not know how to use safety equipment such as exit doors, oxygen masks, flotation cushions and life preservers. Flight attendants cannot predict passenger behavior; therefore, the best practice is to build a foundation of shared knowledge during the predeparture safety briefing.

The U.S. National Transportation Safety Board (NTSB), in a 1985 report, said, "In an airplane environment, passengers are passive participants who, for the most part, are unaware of 'why' the safety information they are given is important. As accident investigations have pointed out, the pretakeoff briefing is often



the only safety information they will receive in the event there is an accident."

The specific words used to instruct passengers in the use of oxygen masks, for example, address potential passenger confusion about wearing the mask over the nose and mouth, extending the mask to initiate oxygen flow and breathing normally although the reservoir bag does not inflate. The NTSB report said that each of these briefing elements stems from problems that passengers experienced in the past.

Passenger behavior has been cited in investigations of several incidents. For example, despite routine safety briefings, only one of 53 passengers aboard one flight in 1974 and two of 180 passengers aboard one flight in 1975 were

able to activate oxygen flow to their oxygen masks after cabin decompressions.² As a result, most passengers needed the personal assistance of flight attendants. The NTSB report said that in a 1973 cabin decompression, flight attendants reported difficulty in breathing oxygen themselves while instructing passengers to don masks properly and initiate oxygen flow.

Passenger attention to predeparture safety briefings — and related factors such as their ability to hear and understand safety briefings — also have influenced the survival of passengers in various accidents investigated by U.S. authorities since the 1960s.

U.S. Federal Aviation Administration (FAA) Advisory Circular (AC) 121-24B, *Passenger Safety Information Briefing and Briefing Cards*, said that an alert, knowledgeable person has a greater probability of surviving an emergency situation in a transport category airplane than an unprepared person.

The AC said, "Every airline passenger should be motivated to focus on the safety information in the passenger briefing; however, motivating people, even when their own safety is involved, is not easy. One way to increase passenger motivation is to make safety-information briefings and cards as interesting, meaningful and attractive as possible."

NTSB Study Finds Continuing Problem of Passenger Attention

A report by NTSB contains several conclusions and recommendations that pertain to methods of increasing passengers' attention to safety briefings.⁴ The study investigated 46 evacuations of U.S. commercial aircraft that occurred during incidents and accidents between September 1997 and June 1999, involving 2,651 passengers and 18 aircraft types. The study included a survey of passengers' recollections of their attention to safety briefings.

Robert Molloy, Ph.D., transportation research analyst at NTSB, said that survey questionnaires were sent to people who were passengers on 18 flights of the 46 evacuation flights studied, and 457 passengers responded.⁵ On 17 flights, live safety briefings had been conducted by flight attendants. On one flight involving a wide-body aircraft, a video safety briefing was presented. Overall, 52 percent of the respondents (Table 1) said that they had watched half or less of the safety briefings, Molloy said. Table 2 (page 3) shows passengers' reasons for inattention and Table 3 (page 3) shows their opinions of the safety briefings received on these flights.

"We also asked these passengers if they had looked at the passenger safety card by itself," said Molloy. "Among 431 responses to this question, 293 passengers (68 percent) said that they had not read the card. [On another survey question,] a total of 175 of 399 respondents (44 percent) said that they neither examined the safety card nor listened to more than 75 percent of the safety briefing.

Table 1 U.S. Airline Passengers' Reports of Attention to Predeparture Safety Briefings After 18 Aircraft Evacuations, 1997–19991

	Number of	
Response	Passengers	Percent
Watched 75 percent or all of briefing ²	182	48
Watched 50 percent, 25 percent or none of briefing ³	195	52
Total	377	100

Notes:

- A total of 457 passengers responded to the survey conducted by the U.S. National Transportation Safety Board (NTSB). Eighty of the respondents did not answer this survey question. The passengers were involved in 18 of 46 evacuations of U.S. commercial aircraft that occurred between September 1997 and June 1999.
- NTSB interpreted these responses to mean that the passengers gave attention to the safety briefings.
- 3. NTSB interpreted these responses to mean that the passengers did not give attention to the safety briefings. Fifty of these 195 passengers (13 percent of the 377 passengers who answered this question) said that they did not watch any of the predeparture safety briefing.

Source: U.S. National Transportation Safety Board

"People who said that the safety briefing was helpful [in their evacuations cited] the [value of] information about exit locations. Those who said that the briefing was not helpful [wanted] more information about exit routes, how to use a slide and how to get off a wing. This information had been available to them on safety cards, however.

"Forty-two passengers on these flights were seated in exit rows, and 21 (50 percent) of them watched 50 percent or less of the briefing and did not examine their exit-row safety card. Nine of 42 exit-row passengers said that they had received a personal briefing by a flight attendant, which is recommended but not mandatory [in the United States].

"Our interpretation was that passengers who said they had watched 75 percent or all of a safety briefing really [gave their] attention, but those who said they had watched 50 percent, 25 percent or none of the briefing [did not give attention]."

Molloy said that the FAA in recent years has provided updated guidance to airlines on subjects such as the content of passenger safety briefings, the design of safety briefing cards, the benefits of video briefings and the need for appropriate tone of voice and animated speaking during passenger briefings.

"We have asked for further study of ways to make the safety briefing more interesting, and we are hoping that people will

Table 2
U.S. Airline Passengers' Reasons for Inattention to Predeparture Safety
Briefings After 18 Aircraft Evacuations, 1997–19991

Reason Given	Number of Respondents	Percent
Passenger had seen the safety briefing previously	247	54.0
Passenger believed the content was common knowledge	70	15.3
Passenger was reading during safety briefing	28	6.1
Passenger said view of safety briefing was obstructed	10	2.2
Passenger was distracted by another person (other than child)	8	1.8
Passenger was distracted by child	2	0.4
Passenger was listening to recorded music	1	0.2
Passenger said briefing was too long	1	0.2
Other reasons	44	9.6
No response	46	10.1
Total	457	99.92

Notes

- A total of 457 passengers responded to the survey conducted by the U.S. National Transportation Safety Board. The passengers were involved in 18 of 46 evacuations of U.S. commercial aircraft that occurred between September 1997 and June 1999.
- Total does not equal 100 percent because of rounding to one decimal place.

Source: U.S. National Transportation Safety Board

'think outside the box' [that is, develop innovative solutions not considered previously rather than modify current practices]," he said.

NTSB believes that changes in demographics, culture, communication and technology — such as the popularity of interactive communication — may open creative avenues for addressing passenger-attention issues, he said.

"NTSB does not know the answer, but we know that the problem has not changed in at least 30 years," Molloy said. "We really have not made progress in getting people to watch these safety briefings."

The following preliminary conclusions and recommendations from the report, released in August 2000, pertained to safety briefings:

Table 3
U.S. Airline Passengers' Opinions of Predeparture Safety Briefings After 18 Aircraft Evacuations, 1997–19991

	Number of	
Opinion	Passengers	Percent
Safety briefing was helpful to evacuation	70	38.5
Safety briefing was not helpful to evacuation	71	39
No response	41	22.5
Total	1822	100

Notes

- A total of 457 passengers responded to the survey conducted by the U.S. National Transportation Safety Board (NTSB). The passengers were involved in 18 of 46 evacuations of U.S. commercial aircraft that occurred between September 1997 and June 1999.
- 2. A total of 182 respondents said that they had watched 75 percent or all of the predeparture safety briefing. NTSB interpreted the responses to mean that these passengers gave attention to this safety briefing. NTSB asked only these respondents whether their predeparture briefings had been helpful to them in the evacuation.

Source: U.S. National Transportation Safety Board

- "Despite efforts and various techniques over the years to improve passenger attention to safety briefings, a large percentage of passengers continue to ignore preflight safety briefings. Also, despite guidance in the form of [FAA] advisory circulars, many air carrier safety briefing cards do not clearly communicate safety information to passengers;
- "Passengers benefit from precautionary safety briefings just prior to emergency occurrences;
- "Most passengers seated in exit rows do not read the safety
 information provided to assist them in understanding the
 tasks they may need to perform in the event of an
 emergency evacuation, and they do not receive personal
 briefings from flight attendants even though personal
 briefings can aid passengers in their understanding of the
 tasks that they may be called upon to perform; [and,]
- "[FAA should] conduct research and explore creative
 and effective methods that use state-of-the-art technology
 to convey safety information to passengers. The
 presented information should include a demonstration
 of all emergency evacuation procedures, such as how to
 open the emergency exits and exit the aircraft, including
 how to use the slides."

The 1985 study by NTSB, which reviewed the history of passenger-education actions and recommendations in the

United States and contained similar conclusions, said, "Passengers often do not [give] attention to the flight attendant's oral briefing and accompanying demonstrations, or to the video briefings, or they do not avail themselves of the safety cards. Accident experience has shown that, unless passengers make an effort to [give] attention to pretakeoff safety briefings and read safety cards, they are ill-prepared to act properly if an emergency situation arises."

The report also said that from 1972 to 1985, "neither independent research nor government regulations resulted in significant or innovative changes to the basic methods of conveying safety information to passengers on air carrier airplanes." Exceptions have been safety cards developed by application of scientific principles of human behavior and communication, and the development of video safety briefings, the report said.

The importance of giving attention to safety briefings has been promoted by civil aviation authorities and consumer groups using printed information and Web sites.

FAA's *Fly Smart: An Air Traveler's Guide*, for example, reminds passengers that they play an essential role in aviation safety and that they can take responsibility for their own safety. The first point in the guide is, "Listen to the safety briefing."⁷

The guide said, "Fly Smart travelers always listen to the safety briefing because they know that every aircraft is different. ... Take the passenger safety card out of the seat pocket and follow along while you listen to the safety briefing. Always take a moment to review the card before subsequent takeoffs and landings. One of the best things you can do to be prepared is to mentally plan the actions you would need to take in an emergency. As part of this plan, count seat rows between you and at least two exits. If you have questions about the safety procedures, ask the flight attendant. Flight attendants are professionals; they know about the safety procedures of the aircraft."

The U.K. Civil Aviation Authority (CAA) provides similar guidance in a leaflet, *Travelling Safely*, distributed to passengers by airlines and ticket agencies when passengers receive tickets. The leaflet also has been distributed on request to travel agents, libraries, schools and the public.

The leaflet said, "Why should I listen to the safety briefing? Knowing what to do in an emergency could make all the difference to you and your family. The safety briefing and the safety information card provided in the seat pocket in front of you give vital information on the locations of exits and emergency equipment. As this can vary from one aircraft type to another, it is important to [give your] attention to the safety briefing and read the safety card each time you fly."8

Cabin safety specialists in several parts of the world said that civil aviation authorities typically require predeparture safety briefings and that they specify the elements of information but recommend few techniques for attracting passengers' attention.

For example, AC 121-24B said that the FAA "encourages individual operators to be innovative in their approach in imparting such information."

U.K. CAA Civil Aviation Publication 360, which specifies requirements for operation of aircraft under CAA air operators' certificates, said, "Operators must ensure that minimum distraction occurs during the briefing. ... Where briefings are given by the use of video presentation, cabin attendants must monitor screens to ensure that each passenger receives a full briefing and, particularly with larger aircraft, physically indicate the nearest available exit. Where passengers have not [received] or cannot (because of location) receive a full briefing by video, individual briefings must be given."

Julie Martin, senior air safety auditor for cabin safety of the Civil Aviation Safety Authority (CASA) in Australia, said, "How the operators comply with safety-briefing requirements — video vs. cabin attendant, only, vs. a combination of both — is not specified. I would say, therefore, that it is up to the individual CASA officer to judge if what the operator has in place is adequate or not." 10

Martin said that she has seen novel airline techniques — such as highly entertaining video animation — that "got my attention, but I would be interested to know the results of a passenger study to see how much of the safety information was absorbed and whether the new technique is more effective than the more traditional briefings."

Martin said, "It is difficult for cabin crews to maintain their interest and conscientiousness in regards to attracting passenger attention to the safety briefing because of the repetitive nature, commercial pressures, workload prior to departure and seeming lack of interest from passengers. I also believe that not enough emphasis is put on the importance of the preflight safety briefing during initial and recurrent training. Training often emphasizes the passenger briefings required during a prepared emergency, but not so much the everyday preflight safety briefings."

She said her own recent experience indicates that some passengers have misconceptions about the purpose of the predeparture safety briefing.

"A passenger asked me one day if I was a nervous flier because I took out the safety card and had a look at it," Martin said. "For frequent fliers, it is almost an image thing — they seem to believe that they cannot [give] attention to the safety briefing, or it will look like they do not fly very often and are not 'in the know.' Frequent fliers sometimes presume that they have heard it all before, but do not realize that they are unfamiliar with a different aircraft type or configuration." The fact that, after landing, passengers stand up before the seat belt signs are turned off also indicates some passengers' complacency or disregard for crewmembers' instructions in general, she said.

NTSB Safety Recommendation A-85-93 said, "Some passengers on board air carrier airplanes have contributed to their own injuries or deaths because they were not prepared to respond appropriately to emergencies. ... The preparation of passengers for emergencies depends mainly on flight attendant oral briefings before takeoff, the information contained in the printed briefing cards, videotaped safety briefings and other instructions, sometimes given during the duress of the emergency itself."

FAA recommended in AC 121-24B that the predeparture oral briefing be conducted so that each passenger can clearly hear the message and easily see required demonstrations. Flight attendants giving these briefings should speak slowly and distinctly. The AC contains the following specific advice:

- "Flight attendants giving the demonstrations should coordinate them with the applicable information given in the oral briefing, be animated and make eye contact with as many passengers as possible;
- "The advantage of audio tape or video tape is the assurance that a complete briefing is given, that the diction is good and that an overall high quality briefing is maintained. Recorded presentations also can be adapted for multilingual presentation, signing for hearing-impaired people and other visual presentations that may be more meaningful to passengers;
- "Flight attendants or other appropriate crewmembers should brief passengers as clearly as possible on any additional information about the exits and physically point them out;
- "Each oral briefing provided by a carrier or commercial operator for its passengers must be explained and described in appropriate manuals. This description should include the stipulation that flight attendants should notify the pilot-in-command anytime a passenger is not complying with safety instructions;
- "Flight attendants should neither be assigned to perform nor perform nonsafety-related duties during the safety briefings if those duties could obstruct the view of the passengers or distract them from listening."

U.S. Authorities Disagree About Solutions to Gain Attention

FAA and NTSB have had different viewpoints on the best methods of addressing passenger inattention to safety briefings. NTSB Safety Recommendation A-85-93 said that FAA should "develop methods to improve passenger motivation to listen to safety information." ¹²

NTSB said, in a 1989 letter to FAA, that safety recommendations in 1983 and 1985 had described "the need for comprehensive research to examine behavioral factors that cause passengers not to heed or not to understand safety information." Although FAA and Flight Safety Foundation conducted conferences and workshops about passenger safety education in the 1980s, NTSB said in the letter that "FAA has not determined those factors that affect the attentiveness of passengers to safety information and the passengers' ability to act correctly on the safety information." Nevertheless, NTSB said in the letter that FAA regulatory changes since the recommendations had increased public awareness of cabin safety and that FAA inspectors had been directed to review flight attendant manuals, safety briefing cards and company flight manuals. Thus, NTSB Safety Recommendations A-85-93 through A-85-96 were classified as "closed — acceptable action." 13

FAA's responses to Safety Recommendation A-85-93 and related recommendations included the following points in subsequent years:

- "The FAA agrees that passengers should listen to safety information and understand the meaning of the instructions. However, the FAA is addressing the issue through methods other than behavioral and motivation studies. While the FAA will continue to address cabin safety and passenger motivation issues, it does not believe that studies of behavior modification are the most practical or effective avenues. The FAA has examined the intent of this safety recommendation in depth and believes that the intent of the issue is being addressed fully and effectively by present FAA programs;
- "A very significant portion of air carrier flight attendant training programs is devoted to thorough, standardized safety briefings which use physical demonstrations, instructions to visually examine the safety cards and actual pointing to the various exits and safety equipment. The airlines' training personnel evaluate the effectiveness of their training during periodic observation[s] on passenger flights;
- "Through cabin attendant training programs and inflight monitoring programs, the airlines have developed very effective briefing packages and delivery techniques to transmit safety information to passengers. These programs stress the learning obstacles caused by a lack of passenger motivation and inattention. The FAA monitors the quality of these programs in the classroom environment and during en route inspections;
- "The FAA believes that concentration on the substance and delivery of the information is more practical than studies of behavior modification and assessment of degrees of attention individual passengers might [give]

to a safety briefing. While the FAA will not dismiss the possibility of improving passenger motivation to listen to cabin safety briefings, the FAA emphasis will be to work with industry to make cabin safety briefings effective and the focus of passenger attention;

- "[Floor emergency lighting, briefing cards, marking of emergency exits and emergency lighting] are designed to increase passenger awareness by visually demonstrating the safety procedures that are to be observed in an emergency. These features, when incorporated into safety briefings, will increase both interest and motivation in the airline passenger; [and,]
- "The FAA believes that the present regulations and existing airline training programs are adequate to ensure effective safety briefings and to capture the attention of passengers."¹⁴

Nancy Claussen, cabin safety inspector, FAA Air Carrier Operations, said that FAA's policy regarding passenger attention to briefings has not changed since the early 1990s. Claussen said that AC 121-24B provides FAA's latest guidance, including "encouragement to increase the quality of safety briefings" and examples of methods. ¹⁵ FAA's primary interests are air carriers' compliance with U.S. Federal Aviation Regulations (FARs) and their own procedures, she said.

"Different carriers give the oral briefings or video briefings in different manners and fashions," Claussen said. "Increasing passenger attention to briefings comes up anecdotally; techniques are compared in informal discussions with carriers, but airline A is not held out as better than airline B."

Claussen said that certificate-management teams conduct en route inspections of the 10 major U.S. air carriers under FAA's Air Transportation Oversight System (ATOS). FAA inspectors other than ATOS certificate-management team members conduct en route inspections of the ATOS carriers and other carriers using FAA Order 8400.10 *Air Transport Operations Inspector's Handbook*. Inspectors observe and assess the results of flight attendant duties and cabin procedures, but neither type of inspection includes an evaluation of whether passengers gave their attention to safety briefings, she said.

Many Reasons Offered for Passengers' Inattention

Agnes Huff, a cabin safety consultant, said in 1989 that both the attention of passengers and the content of the safety-briefing message are beyond the control of flight attendants; therefore, the responsibility for personal safety education rests with the individual passenger.¹⁶

Researchers, airlines and civil aviation authorities have offered the following explanations of passengers' beliefs,

attitudes and behaviors with widely varying scientific evidence:

- Briefings may be repetitious, and many lack novelty or variety over time, so they believe that they already have learned the information and that giving their attention is a waste of time;
- Impressions of aircraft accidents, derived from news stories, tend to overestimate the seriousness of the most probable scenarios, underestimate the probability that they will survive and underestimate their need to use safety equipment quickly and correctly;
- They may believe falsely that aviation professionals will be able to accept full responsibility for cabin safety in any emergency, or they deliberately may ignore safety briefings because they see themselves in a passive role, excluded from the safety system;¹⁷
- Frequent fliers may become overconfident about their ability to respond competently in an emergency, or may be complacent about safety, or may believe that they are immune to injury because they have flown so many hours without incident;¹⁸
- Technical problems with the passenger-address (PA) system or video system or excessively noisy conditions
 — may interfere with the communication process;
- Because of their physical stature or seating location, they may have difficulty seeing cabin crewmembers, video screens or on-screen captions;
- They may believe that their personal safety knowledge and actions would be inconsequential to the outcome of an emergency (that is, that they are powerless);¹⁹
- They may shift their attention away from a briefing if the crewmember's delivery is rushed, perfunctory, incompetent or shows lack of interest;
- They may be anxious about flying and may have difficulty focusing their attention on the briefing because of their emotional state;
- They may be unaware of the underlying reasons when flight attendants and pilots give specific instructions in a safety briefing;
- They may be naively optimistic that a particular airline
 — or even the airlines of a particular country never
 will experience an occurrence that requires them to be
 educated about cabin safety;²⁰
- They may experience real or imagined social pressure to respond to safety information with indifference,

contempt or hostility — perhaps to show others that they are seasoned, courageous or resistant to authority;²¹

- They may be first-time fliers or under greater-thannormal stress related to work, travel, family or other distractions, and may try to reduce their stress level by ignoring a safety briefing; and,
- They may be indoctrinated by advertising messages to see themselves only as passive consumers; that is, airline customers "conditioned to believe that personal convenience and personal comfort are the most important aspects of their flights."²²

1988 British Study Influences Current Thinking

The 1988 report of a survey of 500 British airline passengers arriving at London Gatwick Airport, England, (excluding people employed in the aviation industry) said, "Although general knowledge was good [the average score of passengers was 78 percent correct answers to an 11-question survey about information in safety briefings], a tendency was observed for passengers to overestimate their ability to recall some aspects of the preflight briefing and safety card. ... Self-reports of attention to safety information were high, with 79.9 percent of passengers reporting [giving] attention to the briefing on most flights and 59.7 percent reporting reading the card on most flights. However, it is suggested that these percentages are likely to overestimate the actual percentage of passengers who [gave their] attention [because the data are likely to include passengers who only gave their attention to part of the briefing or only glanced at the card]. Frequent passengers reported [giving] the least attention to briefings and safety cards, though they also had more knowledge of safety information than lessfrequent passengers."23

The report said that passengers who flew most often in the prior two years reported [giving] the least attention to briefings and safety cards, yet scored better than infrequent fliers when questioned about knowledge of briefing information. Passengers who scored in the high range on these questions reported [giving their] attention to safety briefings. Business travelers reported a lower level of attention to briefings.²⁴

"Sixty percent of passengers said that they [gave their] attention to the safety briefing every time they flew, and 32 percent reported reading the safety card every time," the report said. "For the safety of all passengers, efforts need to be made to motivate both frequent passengers and infrequent passengers to [give] more attention to safety information. ... The way briefings are introduced may be of prime importance if passengers are to be motivated to [give] more attention." 25

Participants in the study suggested the following methods of gaining the attention of more passengers:

- Make briefings more interesting or varied;
- Explicitly mention the importance of the briefing during its introduction;
- Use videos:
- Use a PA announcement by the captain to emphasize the importance of the safety briefing; and,
- · Avoid rushed briefings.

Some Airlines Combine Video, Live-briefing Elements for Interest

Ron Welding, director of operations standards for the Air Transport Association of America, said that member airlines currently practice two methods of safety briefings: video-delivered and live by a flight attendant.²⁶

"The video variety uses technology available from cinema productions to keep the viewer's attention," Welding said. "This includes quick changes in visuals and a variety of personalities performing the required elements of the briefing. On aircraft that have video, some airlines change the introductions to the safety briefing every 30 days to maintain viewers' attention. The core message remains unchanged.

"The attendant-led briefings tend to be warm, professional and verbatim to the written script. Much depends, too, on the environment of a specific flight, whether the departure is relatively calm or hurried. Regardless of the environment, however, the predeparture briefing remains a priority responsibility. Flight attendants do a great job of adapting their delivery and timing to the circumstances. Airlines are trying a number of techniques to get the traveling public to [give] attention to important information."

Welding said that U.S. airlines are free to be as creative as they wish in packaging the message and getting passengers' attention; nevertheless, they take the safety briefing seriously and typically do not depart from conventional delivery of the safety message. Airlines have incorporated the guidance from AC 121–24B into their safety briefings, he said.

"The predeparture safety briefing provides important safety information that could be crucial for the survival of passengers in the event of an emergency," Welding said. "Today's predeparture briefings subject airline passengers to several required announcements — for example, those concerning smoking regulations and smoke-detector tampering — which, although related to passenger safety, could be deferred until after takeoff. Consequently, the predeparture briefing now may exceed the saturation point of passengers, with the result that some of the more critical information is not received or is tuned out [ignored] entirely.

Any reduction in the noncritical items — to provide shorter, less cluttered and more focused predeparture briefings — would help reduce passenger information overload. [Fewer noncritical items would] increase the likelihood of passenger attention to the briefing and increase the likelihood of passengers remembering the information."

He said that many cabin safety specialists believe that briefing practices should take into account national cultural practices.

"The challenge is to motivate passengers to be receptive and attentive to the safety briefing, which is designed for all passengers and must be straightforward and at a fundamental level — albeit redundant to frequent travelers," said Welding. "Airlines take safety very seriously and believe passengers also take safety seriously. Therefore, most U.S. airlines do not use humor in safety-related PA announcements. The jury is still out on humor. Among safety professionals, the concern is that people might remember the joke but not the content of the safety briefing."

Several cabin safety specialists said that they have noticed that novelty is a common element among video briefings that capture passengers' attention — whether by unique digital animation characters, attractive airline employees or professional actors. Any dramatic, unexpected change may increase the level of passenger interest.

One Video Introduces Another To Attract Attention

Kellie Schechinger, manager of onboard communications for Northwest Airlines and a former flight attendant, said that producing video safety briefings involves recollection of her own experiences as a crewmember and use of creativity to exploit passengers' attraction to novelty and variety.²⁷

Schechinger said, "Our safety-demo shows [video safety briefings] are a critical part of communication with passengers. They show and tell the safety information. We change our [video safety briefing] every couple of years to have a different look and feel. Each time, we think through [the need to capture and keep passengers' attention]. Passengers tune out a 'talking head' [the static image of a person's face speaking on the screen]. We typically use two different voices and change the people and the pace to keep passengers' interest. One person may demonstrate seat belts; one may demonstrate oxygen masks. We would not want to show the same person conducting the whole demonstration."

Flight attendants on all of the airline's international aircraft and all Boeing DC-10 and 757 aircraft conduct video safety briefings. Flight attendants on other aircraft conduct live passenger safety briefings.

Every month, the airline produces a 30-second video — called a "safety open" — to draw passengers' attention to the screen before the video safety briefing begins. The content of the safety open has ranged from a story about family members employed by the airline to a music video featuring B.B. King, an American blues guitarist and singer.

"The safety open pulls you away from what you are doing, to the screen," Schechinger said. "That is what gets everybody started. Most people stay tuned in because the safety demo is a very short piece." She said that in recent research involving focus groups of passengers, more frequent fliers than expected reported that they had given their attention to predeparture safety briefings.

The airline has added various types of video presentations — such as messages about charitable activities — to encourage passengers to associate the video screen with interesting information, as well as entertainment.

Some Airlines Introduce Digitally Animated Video Briefings

Airlines in several countries used digitally animated video safety briefings during the 1990s. In 1995, a European airline conducted passenger-survey research to measure the effectiveness of the technique. Such videos use computer-animation techniques to generate artificial characters and scenes with various degrees of realism, enabling demonstration of safety equipment and procedures.

Kevin Galligan, general manager of Windmill Lane Pictures, an Irish video and film production company, said, "One of the main advantages of this technique for the airlines is much easier production than a live-action video. There is no need for actors, the use of aircraft or security. All of the airlines' requirements were similar." Nine client airlines used animated videos or combined them with live demonstrations to capture passengers' attention, he said.²⁸

Galligan said that video producers must strike a careful balance between conveying information and entertaining passengers.

"This is the real challenge — trying to get people to watch the video while not boring them," he said.

Windmill Lane and one airline customer employed a research firm to survey 750 trans-Atlantic-route passengers and 750 continental-route passengers using questionnaires intended to measure the perceived effectiveness of computer-animated safety videos and the appeal of the technique. The questionnaires were distributed randomly to passengers by cabin crews. The following results, related to passengers' attention, were reported:

 "On the trans-Atlantic route, 70 percent of the passengers watched 'all' or 'almost all' of the animated in-flight safety video, whereas only 45 percent of the passengers on the continental route watched the personal presentation by cabin crew;

- "Seventy-five percent of the trans-Atlantic passengers thought that the safety presentation was interesting, compared to 37 percent on the continental route; [and,]
- "Sixty-two percent of 'regular fliers' (flying at least once every three months) on the trans-Atlantic route watched 'all' or 'almost all' of the computer-animated video, compared to 30 percent on the continental route." 29

Gillian Freund, assistant director, passenger and in-flight services, of the International Air Transport Association (IATA) said that IATA has not published any guidelines on improving passengers' attention to safety announcements. Freund said that the subject was discussed recently by IATA's In-flight Cabin Safety Working Group, however, in the context of preliminary work on industry recommendations for improving passenger awareness of safety issues.³⁰

Humor Encouraged by Some To Overcome Safety Apathy

Humorous remarks by flight attendants, within guidelines set by some airlines, can be effective in capturing passengers' attention to safety briefings, but potential risks exist. Some passengers may respond negatively, for example, perceiving this technique as unprofessional behavior that interferes with their concentration. Critics also have said that joking might diminish the authority of flight attendants.

Southwest Airlines, a U.S. air carrier, recognizes that humor is inherently controversial, but believes that lighthearted references to popular culture, for example, also can tap into the common experience of passengers.

Kathy Pettit, Southwest Airlines director for customers, said that most U.S. airlines' efforts to adopt specific attentiongetting strategies are fairly new. These efforts have emerged from an intense focus on airline safety by passengers, the U.S. Congress, NTSB, FAA and news media, she said.³¹

Pettit said, "Airlines always were very concerned about giving the briefing accurately and consistently, making sure that everything was covered and that nothing was omitted. At one airline where I worked, every announcement was read verbatim from a little green book. But the net long-term effect was that the audience shut down [that is, tended to stop giving attention]. Thinking that they had heard [briefings] a hundred times before, these tuned-out audiences were not aware that emergency exits, exit paths and oxygen masks could be different, depending on the aircraft type. For example, the oxygen mask on one aircraft came out of a seat-back panel;

on another aircraft, the oxygen mask came out of the overhead passenger-service unit. If you had not listened to the briefing, you would be completely surprised if the mask popped out of the seat back in front of you.

"FAA tells us what must be imparted to the customer before takeoff, during descent and prior to landing. In terms of delivery, we have been given freedom to use PA announcements as we see fit — as long as mandatory safety information is given to the passenger. We use time on the PA system, for example, to announce connection information and frequent-flier plans."

The airline's flight attendant manuals contain some recommended announcements and define mandatory briefing information. Development of a personal style of delivering the oral briefing is encouraged, but training does not require the airline's flight attendants to do so, she said.

"Our flight attendants must convey accurately anything underlined in the manual, but we do not require them to read or recite [this information] in a rote, verbatim manner," said Pettit. "We encourage them to be casual and forthright. We are not afraid of song or humor during the presentation ... because when our flight attendants use their personalities, talents and senses of humor [this results in a better] relationship with customers. We realize that every flight attendant does not sing well or tell jokes well. There is no formal way of disseminating the humorous elements of announcements; crews pick up ideas from other crews."

The airline does not have scientific data to support its policy on humor. Nevertheless, letters from customers have supported this technique, Pettit said.

"We get thousands of letters a year from customers who say that they enjoyed the song or the joke or the flight attendants' sense of humor — so much in fact that some say they listened to a preflight safety briefing for the first time," said Pettit. "Compliments about briefing techniques have heavily outweighed complaints. We have [given] attention to our mail and to what our customers tell us on flights." Passengers rarely say that they believe that "airplanes are no place for humor," she said.

"One definition of 'professional' is making a business or trade of something that others do for pleasure," Pettit said. "We do not see any reason why a flight attendant cannot be professional and use humor. Customers should see that you enjoy what you are doing. Safety information does not have to be alarming to be effective."

Pettit said, "We value the diversity in our passengers and employees, and we recognize the dangers in crossing boundaries of culture and personal taste. But we believe our people know how to do the right thing, apply common sense and use good judgment in safety briefings."

Delivery by Flight Attendants Improves Attention to Briefings

The 1985 NTSB report said that a flight attendant's professionalism, the content of a briefing and the effective delivery of a live briefing are interdependent — and controllable — elements of an effective briefing. When synchronized, the elements encourage passengers to be attentive to predeparture safety briefings. The following recommendations for successful briefings also have been suggested by various cabin safety specialists:

- Flight attendants should craft carefully the first impression they make on passengers;
- Leadership and credibility should be established immediately by confident behavior, a pleasant demeanor and showing professional knowledge of aircraft safety features:
- Appropriate eye contact and body language should reinforce the spoken message;
- Cabin crewmembers should practice consistently good public-speaking techniques such as thoughtful timing, pacing and articulation of words for a diverse audience:
- Crews should master optimum use of the PA system and video system, noticing and reporting promptly any problems that could compromise safety or cause flight delays;
- Flight attendants should show personal enthusiasm for the subject during every safety briefing; and,
- Crews should avoid hurried safety briefings and work to resolve any systemic problems involving insufficient time to conduct briefings effectively.

In summary, pilots and flight attendants may benefit from recurrent training or other reinforcement on the importance of high-quality safety briefings. Many research studies have influenced current airline practices, and important passenger-education advances have followed. Nevertheless, techniques that will capture consistently the attention of all passengers have not been identified. While incremental improvements continue, cabin crewmembers have an opportunity to help devise better techniques and to make current techniques as effective as possible.

Notes and References

1. U.S. National Transportation Safety Board (NTSB). Safety Study — Airline Passenger Safety Education: A Review

- of Methods Used to Present Safety Information, Document No. NTSB/SS-85/09. October 25, 1985.
- 2. Johnson, D.A. *Just in Case: A Passenger's Guide to Airplane Safety and Survival*. New York, New York, U.S.: Plenum Press, 1984. Cited in Fennell, P.J.; Harris, J.R.; Muir, H.C. *Passenger Knowledge of Airline Safety Information*. College of Aeronautics Report No. 9111. Cranfield, England: Cranfield Institute of Technology, November 1988, 2.
- 3. U.S. Federal Aviation Administration (FAA). *Passenger Safety Information Briefing and Briefing Cards*. Advisory Circular (AC) 121-24B, February 1, 1999, 1.
- 4. NTSB. Safety Study: Emergency Evacuations of Commercial Airplanes (in press). Abstract of Final Report, June 27, 2000.
- 5. Molloy, Robert. Telephone interview by Rosenkrans, Wayne. Alexandria, Virginia, U.S., July 13, 2000. Flight Safety Foundation, Alexandria, Virginia, U.S.
- 6. NTSB. Safety Study Airline Passenger Safety Education: A Review of Methods Used to Present Safety Information, 1.
- 7. FAA. Fly Smart: An Air Traveler's Guide, www.nw.faa.gov/ats/zdvartcc/safety/flysmart.html, January 1996.
- 8. U.K. Civil Aviation Authority (CAA). *Travelling Safely*. CAA Document No. 477, 1999.
- 9. U.K. CAA. Civil Aviation Publication (CAP) 360 Part 1, "Air Operators' Certificates, Operation of Aircraft," Section 3, 1.4 and 1.5. Because of the current transition to Joint Aviation Authorities JAR-OPS in the United Kingdom, a U.K. air carrier now may be a JAR-OPS operator that does not comply with all CAP 360 requirements and guidance.
- Martin, Julie. E-mail communication with Rosenkrans, Wayne. Alexandria, Virginia, U.S., July 5, 2000. Flight Safety Foundation, Alexandria, Virginia, U.S.
- 11. NTSB. Safety Recommendation A-85-93. In FAA National Aviation Safety Data Analysis Center (NASDAC) NTSB Recommendations to FAA and FAA Responses Report.
- 12. NTSB. Safety Study Airline Passenger Safety Education: A Review of Methods Used to Present Safety Information, 56.
- 13. NTSB. Letter to FAA, October 10, 1989. In FAA NASDAC NTSB Recommendations to FAA and FAA Responses Report.

- 14. FAA. Letter to NTSB, Jan. 27, 1989. In FAA NASDAC NTSB Recommendations to FAA and FAA Responses Report.
- Claussen, Nancy. Telephone interview by Rosenkrans, Wayne. Alexandria, Virginia, U.S., July 27, 2000. Flight Safety Foundation, Alexandria, Virginia, U.S.
- 16. Huff, Agnes. "Just Who's Responsible for Passenger Education?" In *Proceedings of the International Aircraft Occupant Safety Conference and Workshop.* Arlington, Virginia, U.S.: Flight Safety Foundation, 1989, 128.
- 17. Wood, Richard, "Put the Passengers on the Team." In *Proceedings of the 12th Annual International Aircraft Cabin Safety Symposium*, Torrance, California, U.S., Feb. 6–10, 1995, 14.
- 18. NTSB. Safety Study Airline Passenger Safety Education: A Review of Methods Used to Present Safety Information, 3.
- Becker, M.A. "Behavioral Stress Response Related to Passenger Briefing and Emergency Warning Systems," SAFE Journal, Volume 3 No. 2, 1973, 6–9. Cited in NTSB. Safety Study — Airline Passenger Safety Education: A Review of Methods Used to Present Safety Information, 108.
- 20. Rose, Rhonda. "Passenger Education: The Australian Perspective." In *Proceedings of the International Aircraft Occupant Safety Conference and Workshop.* Arlington, Virginia, U.S.: Flight Safety Foundation, 1989, 136. Rose said that concerning the possibility of involvement in an airline accident, the average Australian passenger likely would say, "She'll be right, mate, this is Australia. This doesn't happen here."
- 21. NTSB. Safety Study Airline Passenger Safety Education: A Review of Methods Used to Present Safety Information, 108. An NTSB study in 1973 said that safety briefings about seat belt use were being disregarded by

- many passengers. The report said, "This indifference to personal safety may have been caused by passengers not understanding fully the reasons for having seatbelts fastened at times other than during takeoff or landing, or to their experience as 'seasoned travelers' who had flown for years without experiencing either an evasive maneuver or turbulence severe enough to cause discomfort or injury."
- 22. Huff, 132.
- 23. Fennell et al., Summary.
- 24. Fennell et al., 8, 14.
- 25. Fennell et al., 11, 14.
- Welding, Ron. E-mail and telephone communication with Rosenkrans, Wayne. Alexandria, Virginia, U.S., July 11, 2000. Flight Safety Foundation, Alexandria, Virginia, U.S.
- 27. Schechinger, Kellie. Telephone interview by Rosenkrans, Wayne. Alexandria, Virginia, U.S., July 17, 2000. Flight Safety Foundation, Alexandria, Virginia, U.S.
- 28. Galligan, Kevin. E-mail communication with Rosenkrans, Wayne. Alexandria, Virginia, U.S., July 20, 2000. Flight Safety Foundation, Alexandria, Virginia, U.S.
- 29. Galligan, Kevin. "A Measurement of the Effectiveness of Computer Animated In-flight Safety Videos." In *Proceedings of the 14th Annual International Aircraft Cabin Safety Symposium*, Torrance, California, U.S., February 3–6, 1997, 178–184.
- 30. Freund, Gillian. E-mail communication with Rosenkrans, Wayne. Alexandria, Virginia, U.S., July 27, 2000. Flight Safety Foundation, Alexandria, Virginia, U.S.
- 31. Pettit, Kathy. Telephone interview by Rosenkrans, Wayne. Alexandria, Virginia, U.S., July 12, 2000. Flight Safety Foundation, Alexandria, Virginia, U.S.

What can you do to improve aviation safety?

Join Flight Safety Foundation.

AVIATION SAFETY RESOURCES TO THE WORLD FOR MORE THAN 50 YEARS

- Read internationally recognized publications including Accident Prevention, Cabin Crew Safety and Flight Safety Digest.
- Use resources of the Jerry Lederer Aviation Safety Library.
- Attend well-established safety seminars for airline and corporate aviation managers.
- Access convenient links to member-company home pages.
- Benefit from Safety Services including audits and complete system appraisals.



Flight Safety Foundation

An independent, industry-supported, nonprofit organization for the exchange of safety information



Join Flight Safety Foundation

For more information, contact Ann Hill, senior manager, membership and development, by e-mail: hill@flightsafety.org or by telephone: +1(703) 739-6700, ext. 105.

Visit our World Wide Web site at http://www.flightsafety.org

We Encourage Reprints

Articles in this publication, in the interest of aviation safety, may be reprinted, in whole or in part, in all media, but may not be offered for sale or used commercially without the express written permission of Flight Safety Foundation's director of publications. All reprints must credit Flight Safety Foundation, *Cabin Crew Safety*, the specific article(s) and the author(s). Please send two copies of the reprinted material to the director of publications. These reprint restrictions apply to all Flight Safety Foundation publications.

What's Your Input?

In keeping with FSF's independent and nonpartisan mission to disseminate objective safety information, Foundation publications solicit credible contributions that foster thought-provoking discussion of aviation safety issues. If you have an article proposal, a completed manuscript or a technical paper that may be appropriate for *Cabin Crew Safety*, please contact the director of publications. Reasonable care will be taken in handling a manuscript, but Flight Safety Foundation assumes no responsibility for material submitted. The publications staff reserves the right to edit all published submissions. The Foundation buys all rights to manuscripts and payment is made to authors upon publication. Contact the Publications Department for more information.

Cabin Crew Safety Copyright © 2000 Flight Safety Foundation Inc. ISSN 1057-5553

Suggestions and opinions expressed in FSF publications belong to the author(s) and are not necessarily endorsed by Flight Safety Foundation. Content is not intended to take the place of information in company policy handbooks and equipment manuals, or to supersede government regulations.

Staff: Roger Rozelle, director of publications; Mark Lacagnina, senior editor; Wayne Rosenkrans, senior editor; Linda Werfelman, senior editor; Karen K. Ehrlich, production coordinator; Ann L. Mullikin, production designer; Susan D. Reed, production specialist; and Patricia Setze, librarian, Jerry Lederer Aviation Safety Library.

Subscriptions: One year subscription for six issues includes postage and handling: US\$240. Include old and new addresses when requesting address change. • Attention: Ahlam Wahdan, membership services coordinator, Flight Safety Foundation, Suite 300, 601 Madison Street, Alexandria, VA 22314 U.S. • Telephone: +1(703) 739-6700 • Fax: +1(703) 739-6708