Passenger Safety Awareness
Reprise 2007:
Still Ignorant After All These Years

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Human Behavior in Emergencies

- **10-15% Uncontrolled and Irrational**
- **10-15% Calm, Cool and Collected**
- **75% Stunned and Bewildered**

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University of Lancaster, UK
What safety information is available?

- Cosper and McLean (2004). Availability of passenger safety information for improved survival in aircraft accidents

How “Safety Aware” are passengers?

- Johnson, D.A. (1979)
- National Transportation Safety Board (2000)

How can “Safety Awareness” be improved?

- Comprehensibility of briefing cards
- Effective presentation media
NTSB (2000)

“a large percentage of passengers continue to ignore preflight safety briefings” and do not read safety briefing cards

Recommended further research regarding the presentation of safety information to passengers

- Determine what differences there are between passengers who normally attend to safety presentations and those who seldom or never attend.
- Compared attitudes and safety awareness of attenders and non-attenders.
Procedure

• 255 respondents interviewed
• Flown at least twice in previous 2 years
• 43 Questions

Results

• Non-attenders more likely to be educated younger men with more flight experience than attenders.
• About half of non-attenders, and majority of attenders would pay more attention to safety presentations if fellow passengers paid attention.
Corbett and McLean (2004). Passenger Safety Awareness: Still Ignorant After All These Years

Phase 1
• April 2000 through June 2000 (Pre-9/11)
• 313 participants flown at least twice in previous 2 years
  • 162 Males, 151 Females
  • Age 18 to 65 years (Mean 37.2)

Phase 2
• November 2002 through August 2003 (Post-9/11)
• 80 participants flown at least twice in previous 2 years
  • 33 Males, 47 Females
  • Age 18 to 69 years (Mean 36.1)
Corbett and McLean (2007). Passenger Safety Awareness Reprise: Still Ignorant After All These Years

Phase 3

- July 2004 through February 2006 (Later)
- 442 participants flown at least twice in previous 2 years
  - 240 Males, 202 Females
  - Age 18 to 81 years (Mean 39.5)
Safety Awareness Questionnaire

- 39 questions
- Designed to gauge respondents’ attention to, and knowledge about, preflight safety briefings and safety briefing cards
- Answered on 5-point scale
  - Never-Occasionally-Quite a Bit-Very Often-Always
  - Strongly Disagree-Disagree-Undecided-Agree-Strongly Agree
Phase 1 Results

- Attenders: 39%
- Non-Attenders: 61%
Best Predictors of Attending and Non-Attending

- Passenger Conformity – Briefing Card
- Oral Briefing Adequacy
- Message Standardization and Simplicity
- Age
- Experienced traveler image

\[ \chi^2(3) = 93.56, \ p < .001 \]
Passenger Conformity
Passenger would read the briefing card if s/he noticed more people reading the cards.

Attender
Non-Attender

Percentage of Responses

Response Choices
Never
Occasionally
Quite A Bit
Very Often
Always
Oral Briefing Adequacy
Oral briefing is inadequate and reading the briefing card is necessary.

- Strongly Agree
- Agree
- Undecided
- Disagree
- Strongly Disagree

Response Choices

Percentage of Responses

Attender
Non-Attender
Message Standardization and Simplicity

<table>
<thead>
<tr>
<th>Rating</th>
<th>Attender</th>
<th>Non-Attender</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>24.0</td>
<td>22.8</td>
</tr>
</tbody>
</table>
Most people prefer to be thought of as experienced travelers rather than someone on their first flight.
“Knowledge-based” responses

- 66% could not correctly identify specific topics covered in preflight oral briefing
- 96% could not identify topics illustrated on briefing cards
- 65% non-attenders, 58% attenders did not know to don oxygen mask first, then assist others
- Less than 50% reported that there would be 2 minutes or less time available to get out of plane once a fire started
- Only 7% stated passengers could remain conscious for 10 seconds or less following rapid decompression at very high altitude
Phase 2 Results

Non-Attenders 71%

Attenders 29%
Best Predictors of Attending and Non-Attending

- Passenger Conformity – Oral Briefing
- Fear Arousal of the Briefing Card Message

\[ \chi^2(4) = 26.76, \ p < .001 \]
Passenger Conformity
Passenger would listen to the oral briefing if s/he noticed more people listening.

Response Choices
- Never
- Occasionally
- Quite A Bit
- Very Often
- Always

Percentage of Responses
- Attender
- Non-Attender
Fear Arousal of the Briefing Card Message

The passenger felt nervous when looking at or thinking about the briefing card.

<table>
<thead>
<tr>
<th>Response Choices</th>
<th>Attender</th>
<th>Non-Attender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>40%</td>
<td>80%</td>
</tr>
<tr>
<td>Occasionally</td>
<td>60%</td>
<td>20%</td>
</tr>
<tr>
<td>Quite A Bit</td>
<td>20%</td>
<td>10%</td>
</tr>
<tr>
<td>Very Often</td>
<td></td>
<td></td>
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<tr>
<td>Always</td>
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</tbody>
</table>

Percentage of Responses
“Knowledge-based” responses

- 71% non-attenders, 74% attenders could not identify topics covered in oral briefing
- 92% could not identify topics illustrated on briefing cards
- 78% non-attenders, 87% attenders knew that passenger should don the oxygen mask first, then assist others
- Only 2 participants, non-attenders, stated that passengers could remain conscious for 10 seconds or less following sudden decompression at very high altitude
- Less than 30% reported that there would be 2 minutes or less for people to get out of a plane once a fire started
Phase 3 Results

- Attenders: 40%
- Non-Attenders: 60%
Best Predictors of Attending and Non-Attending

- Passenger conformity – Briefing Cards
- Oral briefing adequacy
- Education
- Age
- Safety Info Knowledge
- Fear Arousal
- Passenger Self Protection
- Fearfulness

$\chi^2(4) = 157.29, \ p < .001$
Passenger Conformity
Passenger would read the briefing card if s/he noticed more people reading the cards.
Oral Briefing Adequacy
Oral briefing is inadequate and reading the briefing card is necessary.

Response Choices
- Strongly Agree
- Agree
- Undecided
- Disagree
- Strongly Disagree

Percentage of Responses
- Attender
- Non-Attender
The bar chart shows the average age of attenders and non-attenders. The average age of attenders is 44.77 years, while the average age of non-attenders is 36.15 years.
Safety Information Knowledge
Passenger felt sure s/he knew information on briefing card, even before boarding the aircraft.

Response Choices
- Never
- Occasionally
- Quite A Bit
- Very Often
- Always

Percentage of Responses

- Attender
- Non-Attender
Passenger Self-Protection

Passengers can do something to protect themselves after an emergency occurs.

<table>
<thead>
<tr>
<th>Response Choices</th>
<th>Percentage of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>Attender: 30% Non-Attender: 15%</td>
</tr>
<tr>
<td>Agree</td>
<td>Attender: 50% Non-Attender: 40%</td>
</tr>
<tr>
<td>Undecided</td>
<td>Attender: 10% Non-Attender: 10%</td>
</tr>
<tr>
<td>Disagree</td>
<td>Attender: 5% Non-Attender: 5%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>Attender: 0% Non-Attender: 5%</td>
</tr>
</tbody>
</table>
Fearfulness
People who are fearful of flying pay attention to the preflight oral briefing and study the briefing cards.

Response Choices
- Never
- Occasionally
- Quite A Bit
- Very Often
- Always

Percentage of Responses

Attender
Non-Attender
Knowledge-based Responses

- 58% non-attenders, 54% attenders could not identify topics covered in oral briefing
- 95% could not identify topics illustrated on briefing cards
- 77% knew that passenger should don the oxygen mask first, then assist others
- Only 30% reported that there would be 2 minutes or less for people to get out of a plane once a fire started
- Only 5% non-attenders, 8% attenders stated that passengers could remain conscious for 10 seconds or less following sudden decompression at very high altitude
Conclusion

- Considerable reduction from 70% of attenders in 1979 to 40% (or less) could have adverse effects on passenger survival rates in future aircraft accidents.
- Responses from pre- and post-9/11 and later samples suggest changing motivation for attenders.
- Attendees are not internalizing the information to which they are attending.
- There is a need for increased efforts to improve passenger attention to safety presentations.
  - Including information not generally included in the presentations made on board the airplane