



The National Aviation Operations Monitoring Service

Survey Description

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Air Carrier Questionnaire: Structure



- **Section A: Aviation Activity Data**
 - Hours and Legs by make-model and by crew position
 - Previous 60 days and Life-time (total hours only)

- **Section B: Safety Related Events**
 - Consistent data set over time
 - Conflicts, spatial deviations, ground events, weather encounters, equipment problems, pilot-ATC interaction issues

- **Section C: Focus Questions**
 - Topics driven by government/industry priorities

- **Section D: Survey Feedback**
 - Confidence in recall ability
 - Relevance of questions
 - Any problems with specific questions

Air Carrier Questionnaire: General Characteristics



- Questions are closed and specific
 - Asking number of times events occurred
 - Opinion not requested until late in interview (Section D)
- Interview is constructed to minimize time required for completion
 - Average time for completion is 28 minutes
- Many questions follow “skip-pattern”
 - Designed to capture more information if a response to a question is affirmative
 - Transparent to the interview subject
 - Reduces time burden
- Many questions are “menu-driven”
 - Helps standardize response values
- Interviewers are trained and certified
 - Scripted responses provided for most common questions for clarification from interview subjects

Air Carrier Questionnaire: Section A “Demographics”



- Initial questions designed to screen the respondent to ensure they are eligible to complete interview
 - Flew in last 60 days as air carrier pilot
- Balance of questions designed to gain insight into pilot's experience and type of flying
 - Information used for analytical categorization (i.e. aircraft size) and for denominator data for other calculations
- Specific data elements include (Questions A1-A8):
 - Total career hours, hours and legs flown in last 60 days
 - Make model of aircraft flown, type operation flown (pax/cargo)
 - Domestic/international experience in last 60 days, size of airline (three size categories)
 - Position in cockpit i.e. captain, first-officer, flight-engineer, relief pilot or other position

Air Carrier Questionnaire: Section B “Safety Events”



- Covers operational events that the pilot may have experienced
- There are 49 main questions included in Section B covering 9 topic areas
- These are questions designed to be asked over time. Results can be used for trend generation
- The vast majority of responses are 0 or 1

Air Carrier Questionnaire: Section B “Safety Events” Cont:



Questions in Section B are contained in 9 main groupings

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|---|---|
| <ul style="list-style-type: none">■ Aircraft mechanical and equipment (ER1-ER7) pgs 5-7<ul style="list-style-type: none">■ Maintenance, equipment failures, fire, smoke■ Turbulence: Wake and enroute (TU1-TU2): Pg 8■ Weather (WE1-WE6) Pgs 8-9<ul style="list-style-type: none">■ Icing, diversions, ATC Wx issues, windshear■ Passenger Related Events (CP1-CP3) Pg 9<ul style="list-style-type: none">■ Disruption, medical emergency■ Airborne Conflicts (AC1-AC3) pg 10<ul style="list-style-type: none">■ Bird strikes, NMACs | <ul style="list-style-type: none">■ Ground Events (GE1-GE10) pgs 10-11<ul style="list-style-type: none">■ Near collisions, hydroplaning, off runway events■ Aircraft handling (AH1-AH15) pgs 12-15<ul style="list-style-type: none">■ Variety of pilot related issues: Overweight, stalls, unusual attitudes, tail strikes etc■ Altitude Deviations (AD1-AD2) Pg 13<ul style="list-style-type: none">■ Descend below MSA, deviation from assigned altitude■ Air Traffic Control Interactions (AT1-AT2) Pg 13<ul style="list-style-type: none">■ Difficulty in contacting ATC, “high and fast” clearances |
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Air Carrier Questionnaire: Section C “Topical Questions”



- Section C designed to be changeable and flexible
 - Revision and implementation would probably take 2-3 months
 - Development, editing, testing

- Focus of Section C is not trending
 - Focus on specific issues as needs
 - Exploration of new technologies
 - Exploration of specific areas of interest

- Section C provides a “quick-response” capability to explore emerging safety issues

Air Carrier Questionnaire: Section C, “In-Close Approach Changes”



- Current Section C Deals with “In-Close Approach Changes” (ICAC) and Associated Events
- Sixteen main questions (IC1-IC16) pgs 17-20
 - Extensive use of “drill-down” questions to account for
 - Number of ICACs,
 - Type of airplane
 - (“steam-gage” or “glass”)
 - Type of automation
 - Type of approach
 - Location of airport
 - Type of clearance change
 - Reason for change
 - Type of problem, if any, associate with change

Air Carrier Questionnaire: Section D, “Feedback”



- Last section of the questionnaire designed to obtain feedback from interview subjects
- Five questions (D1-D5) Pgs 21-22 provide NAOMS team with information about the survey
 - Confidence that questions were answered correctly
 - Listing of poorly worded questions
 - Issues that should be addressed not addressed in the questionnaire (open-ended responses)
 - Internet usage at home (to determine feasibility of web-based surveys)
 - Other comments as appropriate