CIVIL AVIATION AUTHORITY, BANGLADESH

ADVISORY CIRCULAR
FOR AIR OPEATORS

Subject: **COMMUNICATION AND COORDINATION BETWEEN FLIGHT CREW MEMBERS AND CABIN CREWS**

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1. PURPOSE

This advisory circular presents information on common problem associated with crew coordination between flight crew members and cabin crews and how these problems can be avoided.

2. BACKGROUND

The purpose of the cockpit and cabin crew coordination research was to review problems that have arisen with crew communication and coordination, to determine the extent to which the current status of crew coordination could be improved, and to generate specific recommendations for training and standard operating procedures to help ensure that flight crew members and cabin crew work together effectively.

3. DISCUSSION

In certain circumstances it is important for flight crew members and cabin crew to act as one cohesive crew, even though they are trained, scheduled, and generally regarded as two, independent crews. When it is necessary to act as one crew, the activities of the cockpit and cabin should be coordinated. One of the prerequisites for crew coordination is effective communication between all crew members. In a survey of pilot safety representatives and cabin crews, only 37% of the cabin crews and 60% of the pilots said that they thought that communication between the cockpit and cabin is adequate. The key to improving coordination between flight crew members and cabin crew lies not only in improving communication between crew members, but also in increasing flight crew member awareness of cabin crew duties and concerns, and in increasing cabin crew

awareness of flight crew member duties and concerns. Seventeen percent of the cabin crews and 12% of the Pilots surveyed said that their training did not cover each other's duties during emergencies; 51% of the cabin crews and 24% of the pilots said they did not cover each other's duties before takeoff and landing. During normal Operations, it is important that each crew members be familiar with the duties of the other crew members at every stage of the flight so that they can be sensitive to the other's level of workload. Such knowledge helps to avoid miscommunication, unrealistic expectations, and inappropriate requests of other crew members. During emergencies, each crew member should know exactly what to expect from the other crew members so they can work together effectively.

4. COCKPIT-TO-CABIN COMMUNICATION

a. Takeoff and Landing. It is vitally important that cabin crews are given adequate time to prepare the cabin and themselves for takeoff and landing, especially since most accidents occur during these critical phases of flight. Even when cabin crews are informed that takeoff is imminent, problems can arise that result in cabin crews not being properly seated for takeoff, particularly with unusually short taxi times. Similar problems arise when cabin crews do not have adequate time to prepare the cabin for landing and take their jump seats. The potential for problems is heightened when meal or beverage service is offered on very short flights (30 minutes or less). The most effective remedy for these problems is to have a cabin crew inform the captain, either by interphone or signal, that the cabin is secured for takeoff or landing. This procedure was regarded as important by 96% of the pilots and 91% of the cabin crews surveyed.

b. Turbulence. It is important that cabin crew receive timely notification of turbulence from the flight crew. Flight crew members generally warn cabin crews of anticipated turbulence so that lack of such notice is not a common problem. However, it is one that can result in severe injury, particularly to cabin crews, since the majority of the serious injuries that occur as a result of turbulence are incurred by cabin crews. A member of the flight crew should inform the cabin crews of anticipated turbulence prior to the flight, since notification en route may come too late to prevent injury. This is best accomplished by discussing en route weather in a flight crew member/cabin crew preflight briefing. While air operators consider this practice to be standard operating procedure, it is not always done. Only 56% of the cabin crews surveyed said that en route weather is typically covered in a captain/cabin crew briefing. (However, 84% of the pilots surveyed reported covering it.) During the flight, cabin crews need to be informed of the immediacy and severity of unexpected turbulence so that they may determine whether to secure the cabin or to be seated immediately. On large turbojet airplanes, turbulence experienced in the flight deck may be much less than that experienced in the cabin. So, in some cases, cabin crews should advise the flight crew about the severity of turbulence so that the seatbelt sign can be illuminated.

c. Emergencies. The most common examples of problems in communication during emergencies involve the flight crew members not informing the cabin

crews of the nature of the emergency, the time available to prepare the cabin, and the necessary special instructions (e.g., to use only one side of the aircraft in the evacuation). This problem has arisen several times, despite instructions in flight manuals to relay such information to the cabin crew. The quality and timing of the information given to the cabin crew is extremely important in an emergency. Communications from the flight crew should be clear, precise, and instructional. A vague description of the situation without specific instructions my be misinterpreted and result in valuable time being misspent. The timing of the information transfer is as important as the quality of the information. For example, when an aircraft will be landing without a functional nose gear. The captain decides to prepare for an emergency evacuation and to move passengers to the rear of the airplane. The cabin crews should be informed of the decision to move passengers at the same time that they are informed of the emergency. They are then aware of all the conditions before they select and instruct passengers to assist them in the evacuation. Also, in any emergency or unusual situation, it is important that the cabin crews be informed before the passengers, so that they have time to prepare.

5. CABIN-TO-COCKPIT COMMUNICATIONS

Just as with cockpit-to-cabin communications, the timing and quality of the cabin-to-cockpit communications are critical. When cabin crews convey information to the flight crew, the information should be timely and specific. The most common problem with cabin-to-cockpit communications can be divided into two categories: the failure of the cabin crews to convey important safety-related information to the flight crew members and inappropriate requests for information by cabin crews (i.e., breaking the "sterile cockpit" rule for reasons unrelated to safety). Both of these types of communications problems are related to the "sterile cockpit" issue. There are two major problems associated with cabin crew observance of sterile cockpit procedures; sterile cockpit time and sterile cockpit meaning.

a. Sterile Cockpit Time. It is difficult for the cabin crews to judge when sterile cockpit procedures are in effect. Cabin crews have no way of knowing when the aircraft is at 10,000 feet or at the appropriate sterile cockpit altitude, unless they are told or signaled in the same way. Some air operators have advocated the 10-minute rule, i.e.; sterile cockpit procedures should be in effect for 10 minutes after takeoff and 10 minutes before landing. However, it is very difficult to estimate a time interval before an event.

b. Sterile Cockpit Meaning. Many cabin crew do not have a clear understanding of what "sterile cockpit" means. Eighty percent of the pilots and 86% of the cabin crews surveyed said this concept needs to be clarified for cabin crews. That is, cabin crews need to be given specific information about the purpose and meaning of the regulation and what type of information merits contacting flight crew members during the sterile period. There have been many instances of cabin crews going into the cockpit to request passenger information (e.g., on connections) or for other reasons not related to safety when sterile cockpit procedures were in effect. Such interruptions can distract flight crew members

and have a detrimental effect on their performance. However, hesitancy or reluctance on the part of a cabin crew to contact the flight crew members with important safety information because of a misconception of the sterile cockpit rule is potentially even more serious than the unnecessary distraction caused by needless violations of the sterile cockpit. Cabin crews have failed to communicate to flight crew members important information, for example; fire in a galley trash container, a loud noise with vibration, and changes in cabin pressure, for fear of violating sterile cockpit procedures. Cabin crews should be aware that it is always important they report unusual noises and abnormal situations to flight crew members as soon as possible and be specific in their report.

6. EMERGENCY PROCEDURES

Training is widely regarded as the most effective mans of improving crew coordination. Statements in manuals, without the appropriate training, may not lead to the proper response in an emergency. Training for good crew coordination should include instructing flight crew members and cabin crews on each others emergency procedures, codes, signals, and safety-related duties. In an emergency, it is imperative that each crew member interpret emergency signals and codes in the same way. For example, code words or signals for hijacking or evacuation are useless unless each crew member is aware of their meaning. Furthermore, emergency procedures for flight crew members and cabin crews should be compatible. For example, if cabin crew are taught that the second officer will occupy a cabin seat in preparation for a ditching in a certain aircraft, then flight crew members should be informed of this in their training. When manuals for flight crew members and cabin crews are written and revised independently, they should be cross-checked for consistency. Training administrators should ensure that the emergency procedures and other safety-related information presented to flight crew member is compatible with the information bon presented to the cabin crews. In any emergency, the cabin crews should know the nature of the emergency, the time available to prepare the cabin, what the bracing signal will be, and if there are any special instructions. When possible, the flight crew should be ready to give the cabin crews this information in a timely manner. A well-orchestrated preparation for an emergency evacuation, or the handling of any other emergency, requires stressing the appropriate procedures in training for all crew members so that they act as a well-coordinated crew.

7. NORMAL OPERATIONS

a. Coordination between flight crew members and cabin crews during normal operations also requires appropriate training. Crew members should be instructed on each other's safety-related duties and workload during preflight, takeoff, cruise, and landing. Such training helps to avoid miscommunication, unrealistic expectations and inappropriate requests of other crew members. Additionally, training should stress the types and quality of information that one crew member expects from another. This is best accomplished by either having flight crew members and cabin crews in classes together or by having the same instructors teach flight crew members and cabin crews. The training material may also be covered by a cabin crew instructor participating in flight crew member training and a representative of the flight crew (e.g., instructor or check pilot) participating

in cabin crew training. A videotape or slide presentation on each crew member's duties can also be extremely effective, as well as cost effective, when presented by an instructor and discussed.

b. Crew Resource Management (CRM) programs present an ideal opportunity to cover communication and crew coordination between flight crew members and cabin crews during flight training. However, training for flight deck/cabin communication should not be limited to captains, as "cockpit" resource management programs often are. First and second officers usually act as the communication link between the flight deck and the cabin.

c. Cabin crews should receive special instruction regarding "sterile cockpit" procedures so that they neither naively violate them nor hesitate to communicate relevant information to the flight crew. They should be given a clear, operational definition of the regulation and instructed as to when, and with what information, to contact the flight crew. Cabin crews are typically instructed that they should not contact the flight crew with information unless it is "safety-related." This directive alone leaves much room for interpretation. While it would be impossible to describe the kinds of information that should be relayed to the flight crew, perhaps it would be helpful to give a few examples in training. The quality of the decisions (as to whether or not to contact the flight crew) made by the cabin crews will be directly related to the information they received in training. The clearer the cabin crew's understanding of sterile cockpit procedures and flight operations, the better these decisions will be.

8. PRACTICES AND PROCEDURES

There are many simple practices that can help to enhance the working relationship between cabin crews and flight crew members which may be used to foster an atmosphere that is conducive to good communication. These practices include: respectful introductions, displays of common courtesy, announcements from the flight deck during delays to keep cabin crews and passengers informed, and the captain being supportive of cabin crews when problems arise in the cabin (e.g., a disorderly passenger). Perhaps the single most important procedure for setting the stage for good coordination between flight crew members and cabin crews on any flight is a through captain's preflight briefing.

a. Cockpit/Cabin Preflight Briefing. A good flight deck/cabin preflight briefing gives the cabin crews the names of the flight crew members, the in-flight weather, the estimated flight time, and any unusual circumstances expected during the flight. Other topics can also be covered such as flight deck entry procedures, a review of emergency communication procedures, details of the meal service, or any topic that any crew member considers to be important. The briefing should allow crew members to solicit information from each other and, to bring to the attention of the other crew members any information that they believe to be relevant.

b. Other Recommended Practices. Most of the recommended procedures are stated as company policy for many air operators. This indicates a need for these practices to be stressed during crew member training as procedures to be followed on every flight. In addition to a flight deck/cabin preflight briefing, the following practices are highly recommended for optimizing crew coordination:

(1) Warning from the flight crew members to the cabin crews when the time between taxi and takeoff will be shorter than expected and when arrival time will be sooner than expected to give the cabin crews an indication of the time available to prepare the cabin for takeoff and landing;

(2) Notification to the flight crew members from the cabin crews when all pre-takeoff and pre-landing duties have been completed and the cabin is secured;

(3) Pre-takeoff and pre-landing signals or announcements from the flight crew members to allow sufficient time for the cabin crews to be seated;

(4) Use of public address system to alert cabin crews and passengers of anticipated in-flight turbulence;

(5) Notification to cabin crews when turbulence is severe enough to cease in-flight meal and beverage service and/or be seated with their restraints fastened, and when it is safe for them to resume their duties; and

(6) Notification to cabin crews when "sterile cockpit' procedures are in effect. For example, an indicator light above the cockpit doors or on the annunciator panel that is illuminated during the sterile cockpit interval, or a audible tone (as long as it cannot be confused with another signal).

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