



International Civil Aviation Organization

NINTH MEETING OF THE ASIA PACIFIC REGIONAL AVIATION SAFETY TEAM (APRAST/9)

(Bangkok, Thailand, 31 October to 4 November 2016)

Agenda Item 6: Presentations – State / Industry / ICAO

**THE IMPORTANCE OF COLLABORATION AND
HARMONIZATION IN CABIN SAFETY**

(Presented by Sri Lanka)

SUMMARY

This Working Paper highlights the importance of harmonization and collaboration in Cabin Safety as it contributes to the prevention of accidents & incidents, protection of occupants, through proactive safety management, including hazard identification, safety risk management and increase of survivability in the event of an emergency situation.

1. INTRODUCTION

1.1 In commercial aviation the passenger is the most important customer. Therefore all efforts are made to ensure “safe journey” for a passenger who occupies a seat in the cabin. Unlike the early days, aviation is open to all walks of life & all efforts need to have collaboration & harmonization in cabin safety. Passenger makes a flight not only for business or pleasure but for employment opportunities, medical needs, domestic needs, attending emotional affairs as funerals, legal battles etc. & therefore it is natural that airlines have a person with complex needs as a passenger, whose safety is the prime concern in aviation.

1.2 The safety of a passenger in the aircraft cabin lies in the hands of the cabin crewmember as *ICAO defines a -Cabin crew member*, A crew member who performs, in the interest of safety of passengers, duties assigned by the operator or the pilot-in-command of the aircraft, but who shall not act as a flight crew member.

1.3 *Cabin Safety is aimed at minimizing risks to occupants of the aircraft, by reducing or eliminating hazards with the potential for creating injuries and causing damage. Cabin safety focuses on providing a safer environment for the occupants of the aircraft”. (Doc 9859 - 2006 edition)*

The above very clearly emphasises the importance of the role of a cabin crewmember,

The following are some of the known risks to occupants in an aircraft cabin but not limited to;

- a) In-flight turbulence;
- b) Smoke or fire in the cabin;
- c) Decompression;
- d) Emergency landings;
- e) Emergency evacuations;
- f) Unruly passenger; and
- g) Medical emergencies.

1.4 ICAO requires that cabin crewmembers undergo training to be competent to handle normal & abnormal situations in the cabin. Since inflight accidents are statistically rare, the training programme needs to ensure that cabin crew members remain proficient and are able to execute the required tasks.

12.4 These training programmes shall ensure that each person is:

*drilled and capable in the use of emergency and life-saving equipment required to be carried, such as life jackets, life rafts, evacuation slides, emergency exits, portable fire extinguishers, oxygen equipment, first-aid and **universal precaution kits, and automated external defibrillators***

1.4.1 Universal precaution kits & automated external defibrillators are not mandatory items in Annex 6.

Recommendation.— *Medical supplies should comprise:*

- 1) *one or more first-aid kits for the use of cabin crew in managing incidents of ill health; and*
- 2) *for aeroplanes required to carry cabin crew as part of the operating crew, one universal precaution kit (two for aeroplanes authorized to carry more than 250 passengers) for the use of cabin crew members in managing incidents of ill health associated with a case of suspected communicable disease, or in the case of illness involving contact with body fluids; and*
- 3) *for aeroplanes authorized to carry more than 100 passengers, on a sector length of more than two hours, a medical kit, for the use of medical doctors or other qualified persons in treating in-flight medical emergencies.*

ATT B 3 If a cardiac monitor is available (with or without an AED) add to the above list:

1.4.2 The above training requirements emphasizes that the role of a cabin crewmember is not only limited to manage normal, abnormal & emergency procedures , but also to be responsible for security related events, medical situations & a stakeholder in the safety management systems in the cabin. It is now time that ICAO should concentrate on a Cabin Safety Index as FAA has published.

1.4.3 Hence the importance of collaboration & harmonization of training requirements is imperative. It is important that ICAO should have a cabin safety index as FAA has published, for all States to follow suit.

1.5 It is pertinent to note that in the first edition of SMM cabin crewmembers were identified as stakeholders of safety, but the latest edition of SMS mentions cabin crew only as persons involved in reporting safety incidents & but in Chapter 11 of doc 10002 cabin crew are defined as persons involved in managing safety.

1.6 There is a need for harmonization of the terminology “cabin crewmember” in all ICAO documents, publications etc. With code sharing, one world concepts, it is of paramount importance that what is good for the goose should *always* be good for the gander. There should be harmonization in all aspects that a passenger has to go through prior to boarding the aircraft. We will now take a look at the road map of a passenger in aviation.

1. Passenger reports to airport.
2. Goes through a security check.
3. Goes to check-in desk.

4. Goes through Customs & immigration requirements.
5. Awaits at the transit lounge.
6. Boards aircraft.

Can we agree that at all airports & in all airlines, the procedure the passenger has to undergo is the same.

1.6.1 **Security Procedures**

1.6.1.1 Security procedures and arrangements might change from airport to airport due to varying threat levels & that is reasonable, yet LAG is not a mandatory requirement in all States. A passenger may be allowed LAG from one country, but during the transit he might have to forfeit the same items as the next airport might not allow the passenger to take LAG on board.

1.6.2 **Carry-on-Baggage (COB)**

Annex 6. 4.8

The operator shall ensure that all baggage carried onto an aeroplane and taken into the passenger cabin is adequately and securely stowed.

Certain airlines permit 2 pieces of C-o-B but at most it is only one. Some weigh the C-o-B but most don't. What benchmark can we apply for the size of a C-o-B is yet a moot point.

1.6.3 **Ground handling.** Services necessary for an aircraft's arrival at, and departure from, an airport, other than air traffic services.

*4.2.1.3 The issue of an air operator certificate by the State of the Operator shall be dependent upon the operator demonstrating an adequate organization, method of control and supervision of flight operations, training programme as well as **ground handling** and maintenance arrangements consistent with the nature and extent of the operations specified*

How do we quantify ground handling? There is no guidance yet, for the State to evaluate the ground handling arrangements.

1.6.4 **Definition of an infant**

*Annex 6.6.2.2 c.1 a seat or berth for each person **over an age to be determined by the State of the Operator;***

6.6.2.2. C 2 a seat belt for each seat and restraining belts for each berth; and

Some States define an infant as a person who has not reached two years but some defines as three years.

The restraining system used to carry an infant safely, has no harmonization. Some States use the kangaroo belt others say that an infant below 2 years should not be restrained in a seat belt.

4.2.12.4 The operator shall ensure that, during take-off and landing and whenever considered necessary by reason of turbulence or any emergency occurring during flight, all passengers on board an aeroplane shall be secured in their seats by means of the seat belts or harnesses provided.

There is no guidance in the Annex 6 as to how an infant is secured

1.7 The pictures depicted in passenger safety briefing for bracing with an infant too varies.



Airline 1



Airline 2



Airline 3



**** Airline 4**

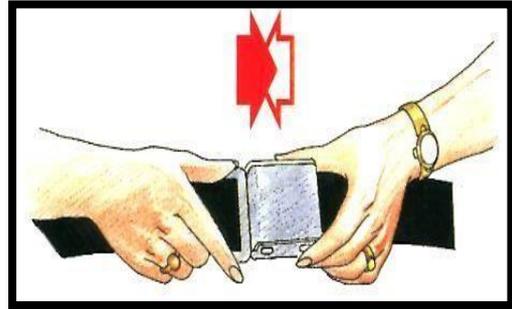
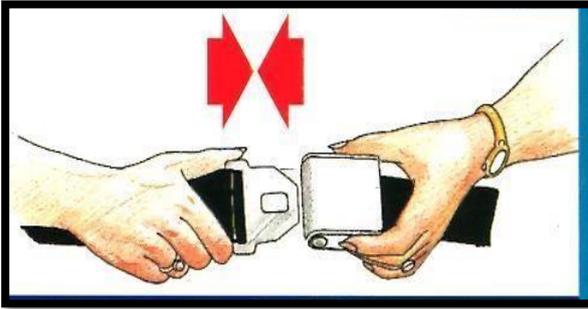
****This is the correct way of bracing with an infant as it protects the head of the infant.**

Annex 6 4.2.12 States;

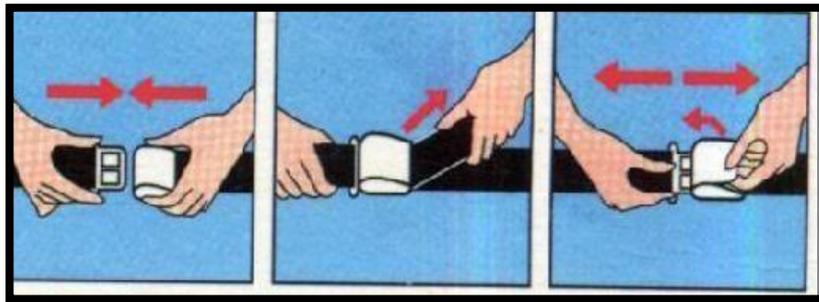
4.2.12.1 An operator shall ensure that passengers are made familiar with the location and use of:

- a) seat belts;
- b) emergency exits;
- c) life jackets, if the carriage of life jackets is prescribed;

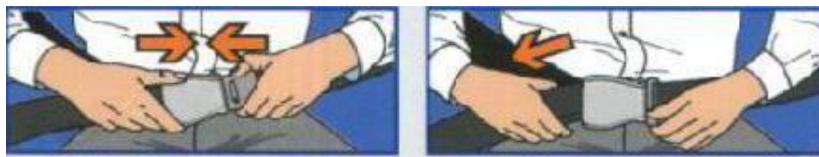
- d) oxygen dispensing equipment, if the provision of oxygen for the use of passengers is prescribed; and
- e) other emergency equipment provided for individual use, including passenger emergency briefing cards.



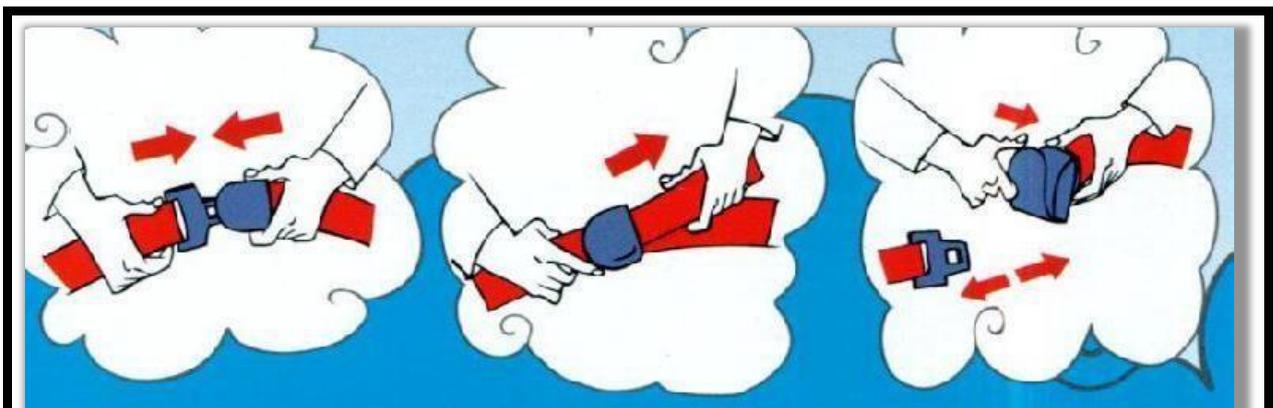
AIRLINE 1



AIRLINE 2

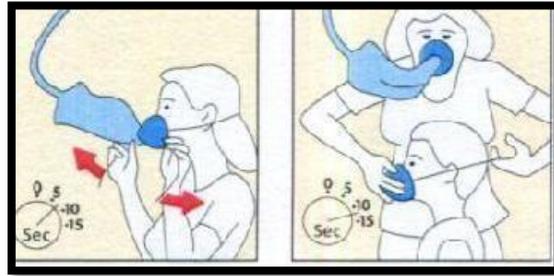


AIRLINE 3

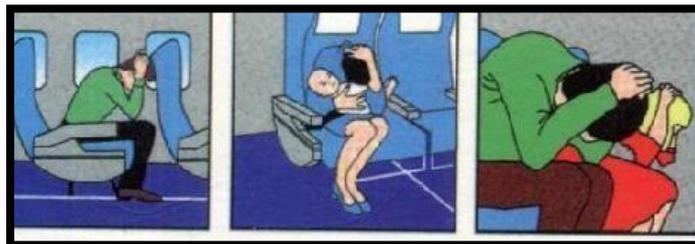
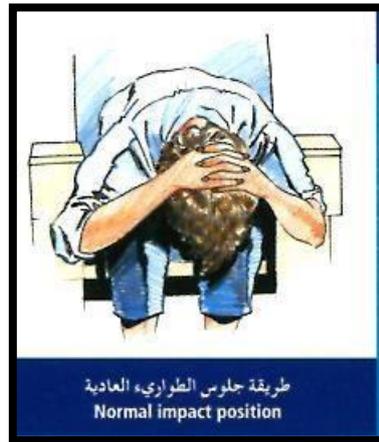


AIRLINE 4

1.7.1 Some airlines depict the use of oxygen in pictures in the safety briefing card to make the adult aware that he should put on the mask before the child but not all do.



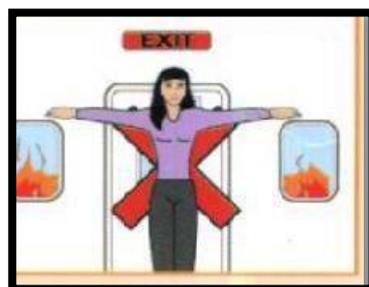
1.7.2 Bracing positions vary from airline to airline





The advertisement has been approved as a STC. But this will hinder the brace position of a passenger.

1.7.3 The following picture of a blocked exit is incorrect as the crewmember will be pushed out.



1.7.4 **Ditching scenarios has no harmonization.**1.8 **Carriage of life jackets**

6.5.3.2 Each life jacket and **equivalent individual flotation device**, when carried in accordance with 6.5.1 a), 6.5.2.1 and 6.5.2.2, **shall be equipped with a means of electric illumination** for the purpose of facilitating the location of persons, except where the requirement of 6.5.2.1 c) is met by the provision of individual flotation devices other than life jackets.

Life jackets in aircraft do have a means for electric illumination but how can a floatation device (as some of the aircraft seats are acceptable as floatation device) have a means for electric illumination is yet another moot point.

1.9 **Fatigue Management**

4.10.1 *The State of the Operator shall establish regulations for the purpose of managing fatigue. These regulations shall be based upon scientific principles and knowledge, with the aim of ensuring that flight and cabin crew members are performing at an adequate level of alertness. Accordingly, the State of the Operator shall establish regulations for flight time, flight duty period, duty period and rest period limitations; and*

Human performance. Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.

Between the two definitions, it is better for ICAO to specify the number of hours that a crewmember may operate for harmonization. Moreover there are scientific evidences which has been established by now.

1.10 **Training of DGR.**

Annex 6. 12 States that a crewmember has to be trained every year but Doc 9284 States that it should be conducted every two years which is conflicting.

*Cabin crew members shall complete a recurrent training programme **annually**. These training programmes shall ensure that each person is:*

e) aware of the types of dangerous goods which may, and may not, be carried in a passenger cabin; and

*doc 9284 4.2.3 Recurrent training must be provided within **24 months** of previous training to ensure knowledge is current.*

2. DISCUSSION

2.1 There seem to be a necessity to have criteria for the following for harmonization, so that all stakeholders in aviation speak the same language when it pertains to cabin safety.

- a) Manual standard for cabin safety.
- b) The requirements for certification of cabin crewmembers.
- c) Definition of an infant & the restraining system to be harmonized
- d) Specified maximum number of flight duty periods
- e) Minimum numbers of cabin crew for each type of aircraft (eu-ops guidance)
- f) Items essential for passenger safety briefing card. (sample safety briefing card)
- g) Harmonization of safety & emergency equipment in annex 6 & doc 10002
- h) To amend doc 9859 to include the cabin crewmember as a stake holder in safety

3. ACTION BY THE MEETING

3.1 The Meeting is invited to:

- a) In keeping with the topic of collaboration & harmonization in aviation the ICAO need to take passenger as the core element in commercial aviation & need to improve guidance material for cabin safety ;
- b) All States to use same terminology for Cabin crewmember ;
- c) To use guidance in ICAO doc 10002 as a minimum standard for training of cabin crewmembers.
- d) ICAO to define a complete list of emergency equipment needed for operation of aircraft.