



Cabin Operations Safety Best Practice Guide





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FOREWORD

Dear Colleagues,

The year 2014 marks the 100th anniversary of the first commercial flight. Throughout these one hundred years, aviation safety has remained the top priority. Cabin operations play a critical role in the safety of air transport worldwide. IATA is proud to launch this 1st Edition of the Cabin Operations Safety Best Practices Guide.

This Guide provides operators with examples of policies and procedures for Cabin Crew in normal, abnormal and emergency situations which can be adapted to meet the unique requirements of their operation. IATA is committed to updating these guidelines to provide operators with necessary information to address emerging risks and share new best practices.

We would like to thank those experts who provided their inputs, particularly the industry specialists from the IATA Cabin Operations Safety Task Force (COSTF), airline experts and government bodies who have contributed to the creation of this document.

*Kevin Hiatt
Senior Vice President
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ABBREVIATIONS

A		
A4A	Airlines for America	
AC	Advisory Circular	
A/C	Aircraft	
ACARS	Aircraft Communication Addressing and Reporting System	
ACAS	Airborne Collision and Avoidance Systems	
ADA	Americans with Disabilities Act	
AEA	Association of European Airlines	
AED	Automatic External Defibrillator	
AIRIMP	A4A/IATA Reservations Interline Message Procedures - Passenger (AIRIMP)	
AOC	Air Operating Certificate	
AO	Audit Organization	
APU	Auxiliary Power Unit	
ASR	Air Safety Report	
ATA	Actual Time of Arrival	
ATC	Air Traffic Control	
ATD	Actual Time of Departure	
AVML	Asian Vegetarian Meal	
B		
BITE	Built In Test Equipment	



BP	Best Practice	
BSCT	Bassinet	
C		
CAA	Civil Aviation Authority	
CAIR	Confidential Aviation Incident Reporting (Australia)	
CASA	Civil Aviation Safety Authority	
CB	Circuit Breaker	
CBP	Customs and Border Protection (USA)	
CBT	Computer Based Training	
CCM	Cabin Crew Member	
CDC	Centre for Disease Control	
CFR	Code of Federal Regulations (USA)	
COG	Chemical Oxygen Generator	
CRD	Child Restraint Device	
CRM	Crew Resource Management	
CRS	Child Restraint System	
CPR	Cardio Pulmonary Resuscitation	
CSR	Cabin Safety Report	
CVR	Cockpit Voice Recorder	
D		
DG	Dangerous Goods	



DGR	IATA Dangerous Goods Regulations	
DGCA	Director General of Civil Aviation	
DNR	Do not Resuscitate	
DOT	Department of Transport	
DTL	Duty Time Limitation	
DVT	Deep Vein Thrombosis	
E		
EASA	European Aviation Safety Agency	
EDW	Electronically Dimmable Windows	
ELT	Emergency Locator Transmitter	
EMK	Emergency Medical Kit	
EOW	Extended Overwater	
ETD	Estimated Time of Departure	
EROPS	Extended Range Operations	
ESAN	Emotional Support Animal (USA)	
ETA	Estimate Time of Arrival	
ETOPS	Extended Twin Engine Operations	
F		
FA	Flight Attendant	
FAA	Federal Aviation Administration	
FAK	First Aid Kit	
FAQ	Frequently Asked Question(s)	



FAR	Federal Aviation Regulations	
FDP	Flight Duty Period	
FL	Flight Level	
F/O	First Officer	
FOD	Foreign Object Debris Foreign Object Damage	
FREMEC	Frequent Traveler's Medical Card	
FRMS	Fatigue Risk Management System	
G		
GADM	Global Aviation Data Management (IATA)	
GM	Guidance Material	
GPS	Global Positioning System	
GPU	Ground Power Unit	
H		
HAZMAT	Hazardous Materials (Dangerous Goods)	
HF	High Frequency	
I		
IATA	International Air Transport Association	
ICAO	International Civil Aviation Organization	
IFB	Inflight Board	
IFC	Inflight Council	
IFE	Inflight Entertainment	



INFT	Infant	
INTL	International	
IOC	IOSA Oversight Committee	
IOSA	IATA Operations Safety Audit	
ISASI	International Society of Air Safety Investigators	
ISM	IOSA Standards Manual	
IV	Intravenous	
J		
K		
L		
LAR	IATA Live Animal Regulations	
LAV	Lavatory	
LCD	Liquid Crystal Display	
LED	Light Emitting Diode	
LEO	Law Enforcement Officer	
LH	Long Haul	
LJ	Life Jacket	
M		
MAG	Medical Advisory Group	
MEDIF	Medical Information Sheet	



MEL	Minimum Equipment List	
MMEL	Master Minimum Equipment List	
MoU	Memorandum of Understanding	
N		
NAA	National Aviation Authority	
NOTOC	Notification to Captain	
NTSB	National Transportation Safety Board	
O		
O2	Oxygen	
OFSH	Operators Flight Safety Handbook	
OHB	Overhead Bin	
OM	Operations Manual	
OPD	Orthotic Positioning Device	
OSH	Occupational Safety and Health	
P		
PA	Public Address	
PAX	Passenger(s)	
PBE	Portable/Protective Breathing Equipment	
PDA	Personal Digital Assistant	
PED	Portable Electronic Device	
PHONETIC ALPHABET		



	A	ALPHA
	B	BRAVO
	C	CHARLIE
	D	DELTA
	E	ECHO
	F	FOXTROT
	G	GOLF
	H	HOTEL
	I	INDIA
	J	JULIET
	K	KILO
	M	MIKE
	N	NOVEMBER
	O	OSCAR
	P	PAPA
	Q	QUEBEC
	R	ROMEO
	S	SIERRA
	T	TANGO
	U	UNIFORM
	V	VICTOR
	W	WHISKY
	X	XRAY
	Y	YANKEE



	Z	ZULU
PIC	Pilot-in-Command	
POB	Portable Oxygen Bottle	
POC	Portable Oxygen Concentrator	
PRM	Person with Reduced Mobility	
PIL	Passenger Information List	
PSU	Passenger Service Unit	
Q		
QA	Quality Assurance	
QC	Quality Control	
QRH	Quick Reference Handbook	
R		
RFF	Rescue and Firefighting	
RON	Remain Overnight	
RP	Recommended Practice	
RTO	Rejected Takeoff	
S		
SAG	Safety Action Group	
SCCM	Senior Cabin Crew Member	
SeMS	Security Management Systems	



SEP	Safety Equipment and Procedures	
SH	Short Haul	
SMS	Safety Management System	
SOP	Standard Operating Procedure	
SPML	Special Meal	
	AVML	Asian Vegetarian Meal
	BBML	Baby Meal
	BLML	Bland Meal
	CHML	Child Meal
	DBML	Diabetic Meal
	FPML	Fruit Platter Meal
	GFML	Gluten Intolerant Meal
	HNML	Hindu Meal
	KSML	Kosher Meal
	LCML	Low Calorie Meal
	LFML	Low Fat Meal
	LSML	Low Sodium Meal – No Salt Added, Sodium restricted
	MOML	Muslim Meal
	NLML	Low Lactose Meal – Low dairy, Low milk, Lactose intolerant
	RVML	Vegetarian Raw Meal
	SFML	Seafood Meal
	SPML	Special Meal
	VGML	Vegetarian Vegan Meal



	VJML	Vegetarian Jain Meal
	VLML	Vegetarian Lacto-Ovo Meal
	VOML	Vegetarian Oriental Meal
SRB	Safety Review Board (SMS)	
STD	Scheduled Time of Departure	
STU	Standard Unit	
T		
TCAS	Traffic Collision Avoidance System	
T/O	Takeoff	
TSA	Transportation Security Administration (USA)	
TSR	Transportation Security Regulations (USA)	
TTL	Taxi, Takeoff and Landing	
TUC	Time of Useful Consciousness	
U		
UMNR	Unaccompanied Minor	
V		
VDU	Video Display Unit	
VHF	Very High Frequency	
W		
WG	Working Group	



WHO	World Health Organization	



DEFINITIONS

The IOSA Standards Manual contains a complete list of Cabin Operations Safety related definitions. These can be viewed at: www.iata.org/iosa . For the purposes of this guide, the following definitions apply:

Cabin Crew	Crew members that are not Flight Crew members and are designated to perform safety duties in the passenger cabin in accordance with requirements of the operator and the Authority; qualified to perform cabin functions in emergency situations and enact procedures to ensure a safe and orderly evacuation of passengers when necessary. Equivalent Terms: Flight Attendant, Cabin Attendant
Crew Member	A member of either the Flight Crew or the Cabin Crew; when used in the plural (i.e. Crew members), refers to flight and Cabin Crew collectively.
Pilot-in-Command	Pilot assigned to each flight that is responsible for the operation and safety of that specific flight at all times.
Crew rest seat	Seat intended for Crew rest during cruise.
Emergency exit rows	Passenger seat rows leading to an emergency exit.
Evacuation	Passengers and/or Crew evacuate aircraft via escape slides, doors, emergency exits, or gaps in fuselage, usually initiated in life threatening or catastrophic events.
Flight Crew	The Crew members essential to the operation of an aircraft, the number and composition of which shall not be less than that specified in the operations manual and shall include Flight Crew members in addition to the minimum numbers specified in the flight manual or other documents associated with the certificate of airworthiness, when necessitated by considerations related to the type of aircraft used, the type of operation involved and the duration of flight between points where Flight Crews



	<p>are changed.</p> <p>For each flight, the Flight Crew members shall include the Pilot-in-Command and may include, as appropriate:</p> <p>One or more Co-Pilots;</p> <p>When a separate flight engineer’s station is incorporated in the design of an aircraft, one flight engineer especially assigned to that station, unless the duties associated with that station can be satisfactorily performed by another Flight Crew member, holding a flight engineer license, without interference with regular duties;</p> <p>One member who holds a flight navigator license in all operations where, as determined by the State of the Operator, navigation necessary for the safe conduct of the flight cannot be adequately accomplished by the pilots from the pilot station;</p> <p>One member who holds a valid license, issued or rendered valid by the State of Registry, authorizing operation of the type of radio transmitting equipment to be used.</p>
<p>Infant</p>	<p>The term —infant refers to small children as defined by the Authority. If the Authority does not have a definition, the operator would publish its own definition in the OM. An infant is typically defined as a child that is less than two years of age.</p>
<p>Rapid Deplaning</p>	<p>Passengers and/or Crew rapidly exit aircraft via boarding doors and via jet bridge or stairs, for precautionary measures.</p>
<p>Senior Cabin Crew</p>	<p>Cabin Crew appointed by the operator to act as chief/Lead Cabin Crew of the Cabin Crew and to take orders directly from the Pilot-in-Command.</p>
<p>Safety</p>	<p>Safety (Operational)</p> <p>A condition in which the risk of injury or damage</p>



	occurring during operations is limited to an acceptable level.
Security	Security (Aviation) The safeguarding of civil aviation against acts of unlawful interference, achieved by a combination of measures and human and material resources.
Unaccompanied Minor	An unaccompanied minor is a child under 12 years of age or, at the request of the parent or guardian a child who is over 12 years of age, who is travelling alone or with a Members' escort.



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INTRODUCTION

This is the first edition of the IATA Cabin Operations Safety Best Practices Guide. It is intended to provide in a single and central reference source, combining “best practices”, sample procedures, industry-agreed recommended practices and regulations relating to the delivery of a safe and efficient cabin operations. This guide contains valuable guidelines, which can be used as benchmarks for airline management to use when establishing their corporate policies, procedures and training programs for Cabin Crew.

These guidelines are not intended to replace or to contradict any current State regulations or the IOSA Standards Manual. Air Carriers should always comply with the regulations and requirements of their competent Authority. It is also the intention of this guide to promote a greater understanding and awareness of the important role of Cabin Operations Safety.

This guide is available in electronic format with links to pertinent websites containing key Cabin Operations Safety related information for airlines. We expect these guidelines to develop over time. Please contribute to their evolution with your suggestions in order to continually improve the content and increase its usefulness to IATA Member Airlines. Comments and suggestions for improvement are welcome, please contact: cabin_safety@iata.org.



1 SECTION – IATA CABIN OPERATIONS SAFETY

IATA Cabin Operations Safety is an industry resource dedicated to enhancing the profile of Cabin Safety, cabin operations, management and delivery. This is to provide members with the tools, services and strategies to continue to achieve operational safety and excellence. It is the industry focal point for Cabin Operations Safety issues and for the promotion of best practices related to the duties of Cabin Crew.

Cabin Safety is a key area which impacts on operational safety. Historically, the role of Cabin Crew was seen as limited to evacuations in a post-accident scenario. Although this remains an important and essential duty of Cabin Crew, today the role of Cabin Crew goes beyond passenger evacuations.

Cabin Safety deals with all activities that Cabin Crew must accomplish during the operation of an aircraft to maintain safety in the cabin. Cabin Crews contribute to safe, effective, and efficient operations in normal, abnormal and emergency situations. As demonstrated in numerous events, Cabin Crew play an important role in preventing serious incidents and accidents, including (but not limited to) events such as in-flight fires, unruly passengers or decompressions. It is for this reason that IATA focuses on Cabin Safety and continues to develop standards, procedures and best practices to ensure safety in all aspects of cabin operations. IATA works with airlines, manufacturers and other industry partners in raising standards and implementing best practices.

Cabin Safety is a critical component of aviation safety as is an airline's safety management program which includes proactive data collection and the ensuing prevention activities regarding:

- Cabin design and operation
- Equipment
- Procedures
- Crew training
- Human performance
- Passenger management

1.1 IATA CABIN SAFETY INITIATIVES

IATA seeks to continuously contribute to the reduction of incidents or accidents, and costs associated with ensuring the safe operation of commercial aircraft. This is achieved through the:

- Development and promotion of recommended practices for the industry
- Analysis of worldwide trends and the initiative of corrective actions
- Cooperation with aircraft manufacturers in developing technical installations, equipment and design



- Organization of conferences and workshops to bring together a broad group of experts and stakeholders

1.2 CABIN SAFETY GUIDELINES

During 2012, IATA worked on specific issues of concern to the Industry in terms of Cabin Safety, such as:

- Unruly passenger prevention and management
- Handling dangerous goods incidents and lithium battery fires in the passenger cabin
- Guidelines for electronic cigarettes in the passenger cabin
- Mitigating a laser illumination in the passenger cabin
- Turbulence management (enhanced guidelines)
- Inadvertent slide deployment prevention (enhanced guidelines)

These guidelines are available at: www.iata.org/cabin-safety

1.3 HEALTH AND SAFETY GUIDELINES – PASSENGERS AND CREW

IATA also drafts guidelines specific to the health and safety of passengers and Crew. The latest guidelines that were drafted in 2012 and early 2013 include:

- Death on board
- Person emitting radiation: Transport of a person who is, or may be, emitting radiation
- Insulin-treated diabetes: For assessment of fitness to work as Cabin Crew
- Suspected communicable disease – General guidelines for Cabin Crew
- Procedures for suspected food poisoning on board
- Seizure disorders: Guidelines for assessment of fitness to work as Cabin Crew

These guidelines are available at: www.iata.org/health

1.4 GADM AND STEADES CABIN SAFETY

Global Aviation Data Management (GADM) is an electronic platform that provides a range of Cabin Safety materials, which will continue to revolve over time. If you would like to register for the public



website in order to gain access to Cabin Safety information please go to the following link for registration:

<http://www2.iata.org/registration/getemailpage.aspx?siteurl=gsic>

STEADES Cabin Safety

IATA provides a business intelligence tool (STEADES) with a focus on automating reports and benchmarks which provides access to data, analysis, and global safety trends on established key performance indicators in comparison to worldwide benchmarks. This enhances safety for IATA member airlines. Examples of in-depth Cabin Safety analysis include:

- Inadvertent Slide Deployments (ISD's)
- Fire, smoke and fume events
- Passengers and Cabin Crew injuries
- Turbulence injuries or incidents
- Rapid deplaning and evacuations
- Unruly Passengers incidents
- Operational pressure

1.5 IATA CABIN OPERATIONS SAFETY TASK FORCE

The work of IATA is completed with the input and support of IATA member airlines in the form of a task force, this work is done for the benefit of IATA member airlines worldwide. IATA Cabin Safety is supported by member airlines that form an important task force that assists IATA to: Represent. Lead and Serve the airline industry in matters of Cabin Operations Safety.

IATA Cabin Operations Safety Task Force (COSTF) reviews all aspects of cabin operations to improve safety and operational efficiency. Members of the COSTF are representatives from IATA Member airlines who are experts in the following areas:

- Cabin Safety and Operations
- Cabin Safety Training
- Accident Investigation
- Human Factors
- Quality Assurance

The Cabin Operations Safety Task Force (COSTF) Membership consists of representatives from IATA Member airlines. Members are of an appropriately senior management level with influence on decisions taken by their company with respect to Inflight Policies and Practices.



The COSTF mandate includes:

- Maintaining current the IOSA Standards Manual (ISM) by conducting the annual revision of Section 5, Cabin Operation (CAB) of the IOSA Standards Manual (ISM), and provide input or opinions relating to questions regarding the CAB section of the ISM as applicable.
- Implementing and maintaining a Cabin Safety Best Practices Guide: Develop, establish and promote standards, procedures and best practices to ensure safety and security in all aspects of cabin operations in commercial aviation.
- Supporting the development of programs for IATA conferences, seminars, exhibitions and training related to cabin operations and safety.
- Supporting the Accident Classification Task Force (ACTF) through the review of the accident classification for the Cabin Safety section of the IATA Safety Report.
- Developing strategies to reduce injuries or cost, associated with the operation of commercial aviation safety.
- Proposing improvements and future needs of strategic importance to commercial aviation safety as applicable to cabin operations.
- Acting as forum where issues on current and anticipated Cabin Safety Operations can be discussed and guidance provided in the effected business process or activity.
- Providing advice and support to the IATA nominated representatives involved in activities with regulatory authorities, the Industry and any other relevant activities.
- Analyzing worldwide developments in the field of Cabin Operations Safety, in liaison with other agencies and organizations.

1.6 IATA OPERATIONAL SAFETY AUDIT (IOSA)

The IOSA (IATA Operational Safety Audit) program is an internationally recognized and accepted evaluation system designed to assess the operational management and control systems of an airline. All IATA members are IOSA registered and must remain registered to maintain IATA membership, which is synonymous with best practice in airline safety.

Every year the IOSA Standards Manual undergoes a thorough revision in all sections, which includes the review of Section 5 – Cabin Operations (CAB).

The IATA Operational Safety Audit (IOSA) manual contains a section dedicated to cabin operations which addresses key elements of Cabin Safety. IOSA Cabin Operations includes standards for:

1. Management and Control
2. Training and Qualification
3. Line Operations
4. Cabin systems and Equipment



Benefits for airlines and regulators:

- Quality audit program under stewardship of IATA
- Continuous updating of standards to reflect regulatory revisions and best practices
- Elimination of audit redundancy, reducing costs and audit resource requirements
- Accredited audit organizations with formally trained and qualified auditors
- Accredited training organizations with auditor training courses
- Structured audit methodology, standardized checklists

For more information on IOSA and to download the latest version of the IOSA Standards Manual, which includes the cabin operations standards and recommended practices, please go to:

www.iata.org/iosa

1.7 BRINGING IOSA TO THE NEXT LEVEL - ENHANCED IOSA

The IATA Operational Safety Audit (IOSA) program has laid a solid foundation for improved operational safety and security, eliminating redundant industry audits. But since its creation in 2003, audit protocols have remained largely unchanged. It is now time to bring even more efficiency to the evaluation of operational safety and security practices, adding value to the IOSA experience for airlines. This is what enhanced IOSA is about. Enhanced IOSA is designed to ensure the following benefits:

- **Continuity:** operators will maintain continuing conformity with all IOSA standards throughout the registration period by conducting ongoing audits as an integral part of their internal quality assurance program. Operators will not only continue to be audited by accredited Audit Organizations (AO), but will have the responsibility for conducting ongoing audits against IOSA Standards and Recommended Practices (ISARPs) under their internal quality assurance program.
- **Implementation:** the 24-month on-site renewal audit conducted by AOs will focus on ensuring the IOSA standards are implemented by operators.
- **Reliability:** operators will demonstrate the reliability and integrity of their internal quality assurance system, to include appropriately trained and qualified auditors. This will be achieved by conducting ongoing internal audits against ISARPs and producing a detailed Conformance Report.
- **Standardization:** the implementation of published auditor action steps tailored for each ISARP.



2 SECTION – SAFETY

2.1 THE CONCEPT OF SAFETY

Within the context of aviation, Safety is: “The state in which the possibility of harm to persons or of property damage is reduced to and maintained at or below, an acceptable level through a continuing process of hazard identification and safety risk management” (ICAO Safety Management Manual (SMM), Doc 9859, Third Edition, 2013)

Safety is the air transport industry’s number one priority. For 2012 the industry Western-built jet hull loss rate was 0.20 per million sectors flown which is a 77% improvement in the accident rate over the last 10 years. The IATA member airline accident rate was 0.00. See the IATA Safety Report:

http://www.iata.org/publications/Pages/safety_report.aspx

Airlines have a responsibility for the safety and security of their passengers and Crew and to ensure that their company policies are communicated to their employees. Cabin Crew need to have a strong commitment to safety and security and understand their role and contribution in the event of an emergency. In particular, they should be encouraged to report any concerns they may have on the safety or security on board.

The content of the section on Safety is intended to provide airlines with a central reference source covering the roles and responsibilities of Cabin Crew. The guidelines are based on the best industry practices and regulations known at the time of publication.

National regulations and the IOSA Standards Manual always take precedence over the contents of this manual.

In establishing their safety policy, it is important for airlines to induce a safety culture to all personnel in the organization, and to ensure responsibility and co-ordination with all relevant departments.

In the event of conflict between safety and service duties, Cabin Crew should be instructed that safety always takes priority.

2.2 HAZARDS AND CONSEQUENCES

A Safety Management System (SMS) is a systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures. When formulating a safety-related policy and standard operating procedures (SOPs), hazards and consequences should be considered.



Hazard: a condition, object or activity with the potential of causing injuries to personnel, damage to equipment/structures or loss of material, or the reduction of ability to perform a prescribed function.

Consequence: the potential outcome(s) of the hazard. (*ICAO Safety Management Manual (SMM), Doc 9859, Third Edition, 2013*)

There is no such thing as absolute safety. In aviation it is simply not possible to eliminate all risks. However, risks can be managed to a level “as low as reasonably practicable.

Risk mitigation can be measured and balanced against time, cost, and the difficulty of taking measures to reduce or eliminate the risk. Effective risk management seeks to maximize the benefits of accepting a risk (e.g. a reduction in time and/or cost) while minimizing the risk itself).

2.3 SAFETY RISK MANAGEMENT

Safety Risk Management is the identification, analysis and elimination (or mitigation to an acceptable or tolerable level) of those hazards. It is a data-driven approach to safety resources allocation, and therefore easier to defend and explain. It aims at balanced allocation of resources to address all risks and viable risk control and mitigation.

Mitigation: Measures to address the potential hazard or reduce the safety risk probability or severity of the hazard’s consequences.

Risk Control Strategies:

- Avoidance – Operation or activity is cancelled because the risks exceed the benefits of continuing the operation or activity.
- Reduction – Frequency of operation or activity is reduced, or action is taken to reduce magnitude of consequences of accepted risks.
- Segregation of exposure – Action is taken to isolate effects of consequences of hazard or build-in redundancy to protect against it.

For more information on safety management, please consult the IATA Safety Management Manual and the ICAO Safety Management Manual Doc9859.



2.4 SAFETY MANAGEMENT SYSTEMS (SMS) AND CABIN SAFETY

ICAO defines a safety management system (SMS) as a systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.

IOSA Section ORG 1.6.5A states that:

ORG 1.6.5A The Operator should have a program that ensures personnel throughout the organization are trained and competent to perform SMS duties. The scope of such training should be appropriate to each individual's involvement in the SMS.

SMS training is an element of the Safety Promotion component of the SMS framework. Within an SMS both management personnel (including the accountable executive) and non-management personnel are expected to complete SMS training. The content of such training is expected to be appropriate to the individual's responsibilities and involvement in the SMS. A training curriculum typically includes modules that provide an overview of the elements of SMS, such as: Event investigation and analysis techniques; Hazard identification; Risk assessment and mitigation; Audit principles and methodology; Communication techniques; Safety reporting; SMS implementation, analysis and continual improvement; Emergency response preparedness.

2.5 SMS TRAINING

CAB 2.4.1A The Operator should have a program that ensures personnel throughout the cabin operations organization are trained and competent to perform SMS duties. The scope of such training should be appropriate to each individual's involvement in the SMS. [SMS] (GM)

Guidance

SMS training is an element of the Safety Promotion component of the SMS framework.

Cabin Crew should be aware of the Safety Management Systems (SMS) program within their airline and how, when and how to report hazards or other concerns. Please see IOSA Section 1 – Organization and Management and Section 5 Cabin Operations for more information on SMS in Cabin Operations.



2.6 REPORTING

An important component of an SMS is a strong reporting system and culture. Safety reporting programs form the most rich and basic source of safety information. Examples include Cabin Safety reports (CSR's), mandatory occurrence reports and voluntary confidential safety reports. These programs can be paper or electronic, mandatory, voluntary, confidential and anonymous. Successful reporting programs are built on the principle of an open reporting culture, where the focus is on safety improvement and not on the assignment of blame. A functional and effective reporting system is a rich source of information, highlighting:

- Operational threats and their approximate frequencies and demographics;
- Specificities of routes, destinations and other operational factors;
- Capability of the Crew to cope with various real-life situations; and
- Errors experienced in operations.

The content of the report typically consists of a narrative and various descriptors for classifying the event. Cabin Crew must report any safety concerns to the Pilot-in-Command and follow corporate guidelines on reporting incidents. Managing a large quantity of reports and distilling useful information from them usually requires a tailored software application. An in-depth study of training-related issues may require an analysis of the narrative parts of the reports, which makes the task more challenging.

2.7 INCIDENT AND ACCIDENT HANDLING

It is considered that the most effective reporting systems are those that are confidential and non-punitive to ensure honest, uninhibited reporting. It is the responsibility of each Crew member to always report to the Pilot-in-Command (verbally during flight) and to the airline (upon arrival or the first point of landing) any hazard, situation, event, or defective equipment that is affecting or could affect safety. This may require completing paper or electronic forms as per the airlines procedures. Completing the reports should be done in a timely manner and it is important for Cabin Crew to cooperate during any post-event investigation.

2.8 CRITICAL INCIDENT STRESS MANAGEMENT

It is recommended that airlines provide a support program for Cabin Crew to manage critical incidents affecting Cabin Crew. For more information please consult the IATA Medical Manual at: <http://www.iata.org/medical-manual>.



2.9 STATEMENTS FROM CABIN CREW TO THE AUTHORITIES

Following an incident, a Cabin Crew could be required to make a statement to the applicable competent authority (e.g. an unruly passenger event requiring police intervention), this could include:

- A briefing of the allegation by the Cabin Crew involved in the incident
- An interview with the complainant
- Particulars of the complainant
- Details of all other persons involved in the incident who may give corroborative evidence
- Details of time, date and place on the aircraft where the offence(s) took place
- A record of “first person” conversation with the offender and Crew members involved in the incident, which should be recorded in written notes made at the time or shortly after the incident

Depending on State legal requirements, the police may require the complainant to be present at the time that the allegation is put to the offender. For more information refer to the Guidance on Unruly Passenger Prevention and Management at www.iata.org/cabin-safety

2.10 STATEMENTS FROM THE CABIN CREW TO THE MEDIA

Events involving air travel can attract media attention and it is common for the media to approach Cabin Crew for their views on sometimes sensitive issues or to share their experience of an incident/accident, which may have occurred on board. Airlines should ensure that their policy with respect to dealing with media queries is clearly communicated to all Cabin Crew so that these situations can be dealt with in a consistent and professional manner. It is recommended that following an incident/accident that a Public Address (PA) be made to reassure passengers. This PA should be carefully worded in order to avoid misinterpretations or quotation from the press. Some airlines have a standard announcement for the Crew to use as template as applicable to the situation. Cabin Crew should not speak to the media or use social media to discuss these events without the expressed approval of their airline.

2.11 CABIN CREW RESPONSIBILITIES

Cabin Crew are responsible for carrying out safety-related duties principally in the aircraft cabin or related to the specific flight, which are essential to the safety and well-being of passengers and



fellow Crew members. Cabin Crew are expected to comply with all their company regulations, instructions and orders issued for Cabin Crew duties.

2.12 CABIN CREW QUALIFICATIONS

Cabin Crew employed by an IATA Member airline must have an appropriate Cabin Crew license or Certificate or comply with local regulations and be registered as a qualified Cabin Crew based on successful completion of the necessary training programs. It is recommended that Cabin Crew should be at least 18 years of age.

All Cabin Crew should have passed a medical examination or comply with other corporate medical requirements to ensure that they are medically fit and physically capable to fulfill the duties specified. They should remain medically fit to continue to discharge the duties throughout the term of their employment.

Cabin Crew are expected to remain familiar and comply with all regulations, procedures, policies, instructions and orders pertinent to the performance of their duties. An operator might utilize other methods that complement training to ensure Cabin Crew remain knowledgeable of the laws, regulations, rules, guidelines and other information that is relevant in the performance of duties. For example, Cabin Crew might have destination specific information or briefing books that explain the customs and immigration processes associated with flying into foreign destinations. Additionally, laws, regulations and procedures might be reviewed to the extent necessary during Cabin Crew briefings prior to duty assignments.

2.13 INSPECTORS AND AUDITORS

Civil Aviation Inspector's and/or Auditor's from audit organization (AO) could perform an inspection or audit. These are usually to assess Cabin Crew training programs, on board safety equipment, procedures and operations. If someone claims to be an inspector or auditor Cabin Crew should ask for identification and inform the Pilot-in-Command. Article 16 of the Convention on International Civil Aviation (the Chicago Convention) stipulates that the appropriate Civil Aviation Authorities of each contracting State has the right to search aircraft and documents of other contracting States. Inspectors may enter the aircraft (or facilities) and inspect safety/emergency equipment, in both the flight deck and cabin, aircraft log books and other documents or question persons concerned with the safe operation of the aircraft.



2.14 AUTHORITY OF THE PILOT-IN-COMMAND

The Pilot-in-Command has full control and authority in the operation of the aircraft, without limitation, and over the other Crew members while on duty. It is the pilot designated by the Operator as being in command of the aircraft and charged with responsibility for the operational control and safe conduct of a flight. Equivalent terms: Captain, Commander.

Second-in-command (SIC): A licensed and qualified pilot that assists or relieves the Pilot-in-Command, not to include a pilot that is on board the aircraft for the sole purpose of receiving flight instruction. Equivalent Terms: Co-pilot, First Officer.

Cruise Relief Pilot: A Flight Crew member that possesses a type rating limiting the privileges to act as a pilot only during the cruise phase of flight or any Flight Crew member who is assigned to perform pilot tasks during cruise flight, to allow the Pilot-in-Command or a co-pilot to obtain planned rest. Equivalent Terms: Cruise Relief Officer (CRO), Relief Pilot, Relief Flight Officer (RFO).

2.15 CHAIN OF COMMAND

In case of incapacitation of any Crew member(s) the recommended chain of command is:

- Pilot-in-Command
- Check pilot, supervisory Pilot-in-Command or relief Pilot-in-Command , if on board
- First officer
- Supervisory first officer or relief first officer, in on board
- Senior Cabin Crew/Chief/Designated on board leader
- Cabin Crew (in order of seniority)

2.16 SENIOR CABIN CREW MEMBER

When required to carry more than one Cabin Crew, an operator should appoint a person to the post of Senior Cabin Crew. It is recommended that airlines assign a Senior Cabin Crew Member (SCCM) who will co-ordinate with the Pilot-in-Command, (cabin safety, security and service related duties) for a flight. The position of SCCM might have a different title or name according to the operator (e.g., purser, lead flight attendant, senior purser or on board leader).

A SCCM should be assigned whenever more than one Cabin Crew is assigned to a flight. The SCCM will act as the liaison with the Flight Crew and has the responsibility to the Pilot-in-Command for the



conduct and co-ordination of normal and emergency procedures specified in airline operations procedures manuals.

Prior to being designated as a Senior Cabin Crew, the following criteria should be met: minimum experience considered acceptable to the applicable national authority; and successful completion of the operator's Cabin Crew leadership training (e.g. SCCM course) as required by national regulations. Start-up operators should establish alternative minimum experience requirements acceptable to the applicable national authority.

The SCCM would liaise with the Pilot-in-Command and act as "chief" of the Cabin Crew, on behalf of the Pilot-in-Command. The SCCM is responsible for all of the Cabin Crew under the authority of the aircraft Pilot-in-Command, including but not limited to:

- Providing effective leadership for the Cabin Crew
- Applying all safety, security and service standards and procedures as outlined in but not restricted to within their operations manual
- Liaising between the Flight Crew and Cabin Crew
- Emergency preparations according to the Pilot-in-Command and/or special instructions
- Reporting to the Pilot-in-Command and the management all incidents, safety concerns of fellow Crew or passengers and situations affecting the safety of the operation
- Reporting/logging all technical irregularities in co-ordination with the Pilot-in-Command

2.17 CABIN CREW

Cabin Crew are an essential part of the team and their roles include, but are not limited to:

- Applying all safety, security and service standards and procedures as outlined in but not limited to their operations manual
- Following all directives on the SCCM under the authority of the aircraft Pilot-in-Command
- Reporting to the SCCM and Pilot-in-Command all situations affecting the safety of the operation and incidents or safety concerns they may have, or that may be communicated to them by a passenger



2.18 CABIN CREW TRAINING PROGRAMS

IOSA

CAB 2.1.1 If the Operator conducts passenger flights with Cabin Crew, the Operator shall have a Cabin Crew training program, approved or accepted by the Authority that ensures Cabin Crew understand their responsibilities and are competent to perform the duties and functions associated with cabin operations. The Cabin Crew training program shall include initial, recurrent, requalification and aircraft type training courses.

All trainees must successfully complete full training before they can be assigned as a Cabin Crew. Airlines shall establish training programs in accordance with the requirements of the applicable national authority of their State/country or in its absence, accordance with recommendations found in the IOSA Standard Manual, Section 5 Cabin Operations (CAB), Chapter 2 Training and Qualification www.iata.org/iosa

2.19 TRAINING RECORDS

Airlines should maintain complete and accurate records of all training undertaken by individual Cabin Crew.

Duration and Validity

The duration and validity of training courses undertaken by Cabin Crew should be in line with State/country regulatory requirements or as a minimum as specified in IOSA when no local regulatory requirements exist.

2.20 COMPETENCY BASED-TRAINING

In 2014, ICAO will be releasing the new Cabin Crew Safety Training manual (Doc 7192 Part E-1 Third Edition). ICAO has drafted this manual with a competency based approach for Cabin Crew. The benefits acquired from competency-based training for Cabin Crew is that the training is focused on both:

- Job Performance; and
- The Adult Learner



In addition, the competencies acquired are observable and/or measurable. Competency based training is training that is adaptable and this approach structures and reduces on the job training. It can also be used as a tool to improve the quality of training and the skills acquired may be transferable. To obtain a copy of this document, please visit: <http://store1.icao.int>

It is perhaps important for Airlines to note what competency based training for Cabin Crew is, and what it is not. Competency based training should not extensively increase or prolong Cabin Crew training nor be a method to expedite Cabin Crew training with a disregard to the learning outcomes. Rather it is learner-centric with a focus on the individual and their ability to perform their job functions.

To meet airline training needs, we need not necessarily more training, but more pertinent and relevant training throughout the industry rather than the old model of prescribed training. In the modern complex world of aviation it is simply impossible to train for a successful outcome of infinite number of possible abnormal or emergency situations because we simply do not know what could possibly happen, we cannot train for it all, but we can prepare for it. The challenge is to successfully equip Cabin Crew to handle the challenges of modern operations with a move from prescribed task-based training to competency based training.

The aim of a competency based training program is to identify, develop and evaluate the competencies required by Cabin Crew to operate safely, effectively and efficiently in a commercial air transport environment, by managing the most relevant threats and errors, and this based on quantitative and qualitative data collected in operations and training.

The implementation of a competency based program should enable operators to develop more effective training programs and to improve operational safety. It is advantageous to develop, train and assess competencies utilizing scenarios that are relevant to operations. Scenarios can sometimes be identified through the data collection and analysis process. In some cases the data may highlight the criticality of certain competencies in the operation, which may lead to a focus in specific areas as part of the training program.

2.21 CABIN CREW MANUAL

Safety regulations are established by the Airlines applicable national authority to ensure minimum standards, and airlines are required to provide each Crew member with a manual, or access to a manual (paper or electronic), containing specific company regulations and safety procedures. Section 5.1 in Appendix A of the IOSA Standards Manual contains the Operations Manual Content Specifications. The content of the Operations Manual shall address the following areas of cabin operations:



Table 5.1 – Operations Manual Content Specifications

The content of the Operations Manual shall address the following areas of cabin operations:

<p>I) Compliance or conformity with:</p> <ul style="list-style-type: none">a) Applicable laws, regulations and rules;b) Standard operating procedures for each phase of flight. <p>II) Administration of first aid, to include guidelines for:</p> <ul style="list-style-type: none">a) Life threatening medical emergencies;b) Cardiopulmonary resuscitation (CPR);c) Injuries and illnesses;d) Use of Automatic External Defibrillator (AED), if applicable. <p>III) Response to abnormal and emergency situations:</p> <ul style="list-style-type: none">a) Aircraft emergency evacuation;b) Cabin decompression, if applicable;c) Onboard smoke and fire;d) Emergency landing;e) Leakage or spillage of suspected dangerous goods;f) Suspected bomb or explosives;g) Hijacking or unlawful intervention. <p>IV) Use of cabin systems and equipment, to include malfunctions:</p> <ul style="list-style-type: none">a) Oxygen systems, if applicable;b) Communication systems;c) Entry and exit doors;d) Lifesaving equipment;	<p>V) Dangerous goods manual or parts relevant to the cabin crew, to include:</p> <ul style="list-style-type: none">a) Dangerous goods prohibited in passenger and crew baggage;b) Information/instructions for dangerous goods permitted in passenger and crew baggage;c) Action to be taken in the event of an emergency. <p>VI) Response to suspected cabin security situations:</p> <ul style="list-style-type: none">a) Least risk bomb locations specific to aircraft type;b) Cabin search. <p>VII) Use of survival equipment</p> <p>VIII) Cabin crew training program</p> <ul style="list-style-type: none">a) Abnormal and emergency situations, emergency evacuation;b) Use of emergency and lifesaving equipment;c) Lack of oxygen, loss of pressurization (as applicable);d) Other cabin crew member assignments and functions;e) Dangerous goods;f) Human performance. <p>IX) Limitations pertaining to flight time, flight duty periods and rest periods.</p>
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2.22 CABIN CREW UNIFORMS

While it is recognized that Cabin Crew uniforms represent the brand image of an airline, they also should be designed with safety, cultural and practical aspects in mind. Care should be exercised that the style and materials used for Cabin Crew uniforms do not affect the ability of the Crew member to perform their normal duties or to help passengers in the event of an abnormal or emergency situation (i.e. fire, evacuation, etc.). The following is intended to serve as a guideline for airlines when selecting new uniforms for their Cabin Crew:

- Airlines should take into account the local and destination climates so that clothing is adaptable to suit changes in the climate
- Uniforms should be distinctive and easily identifiable in the event of an emergency
- Clothing should be comfortable and allow freedom of movement; tight, restrictive clothing should be avoided



- Airlines should consider the material used for Cabin Crew uniforms to ensure that it provides some protection from radiant heat
- If stripes are worn they should be shown to show rank and should be worn on the jacket and shirt, where applicable
- Flat or low-heeled closed shoes or boots (shoes with laces or straps are recommended so that they will not be lost or thrown off)
- Uniform accessories (such as ties, chains, necklaces, scarves, etc.) need to take into account safety considerations
- Metal badges should be designed so as not to cause injury
- It is recommended that Cabin Crews wear their full uniform for takeoff and landing (as applicable to their airline policies and procedures) to offer them the best protection in the event of an emergency and also to serve to better identify Cabin Crew to passengers.

2.23 CABIN CREW MEDICAL STANDARDS

Section 3.2 of the IATA Medical Manual states that: Medical standards for professional and private pilots have long been clearly specified in international regulations (ICAO, Annex 1, Chapter 6); however there is generally no equivalent for Cabin Crew. Usually the airline determines the appropriate pre-employment health assessment required. A few exceptions exist; a certain number of countries require Cabin Crew to be licensed to private pilot standards.

Cabin Crew working conditions

In the absence of official references, it is important to consider the components of the role of Cabin Crew and the flight environment. Cabin Crew are subjected to the same aircraft environment as the Flight Crew. On long-haul, they are exposed to time-zone shift (jet-lag), stopovers in tropical countries, and irregular work patterns. Cabin Crew on board duties include a significant physical component. Cabin Crew are also in charge of passengers “safety and wellbeing”.

Aeromedical assessment

In the absence of specific licensing authority requirements many airlines have found a clear, targeted health questionnaire is a reliable screening tool providing sufficient information to ensure that safety and the airline’s duty of care are addressed. Other airlines prefer to conduct a full medical assessment starting with a full medical history. The majority of applicants will be assessed as medically fit and will enjoy good health throughout their entire flying career. For those who may experience disease or accident, the airline physician should remain not only an aviation medicine expert but also an adviser taking into account every aspect of individual medical problems. Each situation will be unique and will have to be addressed using the following criteria:



- Is the Cabin Crew's medical condition likely to be aggravated by his resumption of work and continuation of his flying career?
- Is this medical condition likely to jeopardize flight safety?

2.24 ALCOHOL, DRUGS & MEDICATION

No Cabin Crew shall consume alcohol or prohibited drugs whilst performing duties in uniform. Airlines should establish procedures to provide for the testing for misuse of alcohol or drugs, or as required by national legislation. The taking of medicine or drugs can impair the ability of Cabin Crew to perform their duties. Airline corporate policies must therefore contain clear instructions as to when medicine or drugs may and may not be taken by Cabin Crew. Cabin Crew must comply with such corporate regulations prior to or during a flight without a doctor's consent.

The consumption of alcohol can impair the ability of Cabin Crew to perform their duties. Airline corporate policies must therefore contain clear instructions as to when alcohol may and may not be consumed by Cabin Crew. Cabin Crew must comply with such corporate policies and procedures.

Cabin Crew should be aware of the use of alcohol and drugs that may have an effect that could impair their judgment in carrying out their duties. In addition, Cabin Crew should check with their doctor for the use of medicine. For more information please consult the IATA Medical Manual at www.iata.org/Medical-Manual.

2.25 NUMBER AND COMPOSITION OF CABIN CREW

The number and composition of Cabin Crew is stipulated in ICAO Annex 6, Chapter 12 Cabin Crew, Section 12.1, Assignment of Emergency Duties, which states, in part: "An operator shall establish, to the satisfaction of the State of the Operator, the minimum number of Cabin Crew required on each type of aeroplane, based on seating capacity or the number of passengers carried, in order to effect a safe and expeditious evacuation of the aeroplane, and the necessary functions to be performed in an emergency or a situation requiring emergency evacuation..."

The Airlines civil aviation regulations will specify the minimum number of Cabin Crew applicable to either passengers on board or to passenger seats. Where this specification is not stipulated it is recommended that there is a minimum of one fully qualified Cabin Crew for every 50 passengers, or passenger seats, installed on the same deck of an aircraft.



2.26 FATIGUE AND SLEEP

Definition of Fatigue: *A physiological state of reduced mental or physical performance capability resulting from sleep loss or extended wakefulness and/or physical activity that can impair a Crew member's alertness and ability to safely operate an aircraft or perform safety related duties. (Fatigue Risk Management Systems (FRMS) Guide, Implementation Guide for Operators (IATA, ICAO, IFAPL), 1st Edition, July 2011.)*

Sleep and rest is essential to combat fatigue. There are also other factors that can reduce the effects of fatigue. Regular physical activity of moderate intensity increases resistance to both stress and fatigue. However, too much physical activity before departure is tiring.

Individuals know their own sleep requirement, and how much sleep they will need in order to be refreshed. However, if the amount of sleep has not been sufficient, particularly over a few days, the individual will build up a "sleep deficit" that will need to be recovered; otherwise it will affect the level of performance.

As Crew members' sleeping patterns may change or be disrupted, due to the nature of flight patterns: Long haul or short haul. Long haul flights cross many time zones, and can therefore disturb sleep patterns. Crew members are awake when they would normally be asleep and vice versa. Short/Medium haul flights, with very early check-in times (i.e. 4:00am), when most people are still in their beds can also disrupt sleep patterns. Rest and sleep is vital for Crew members and they should rest sufficiently before reporting for flight duty.

The nature of the work means that the Crews do not always work every day of the week, or the same hours each day, nor do they eat at the same hour each day, or sleep at the same hour each night. Just when a block of days off means that Crew member can start to get back to a "normal routine", it is time to report for flight duty once again. Sleep is a necessity and sleep deprivation may lead to a serious health disorder. It is essential that Crew members are well rested before operating a flight, including on layovers.

Sleep

Crew members should not sleep at any time during duty or appear to be asleep except during approved Crew rest periods and in designated Crew rest areas. Sleep deprivation is lacking sleep. The need for sleep varies amongst individuals. Some people need more sleep than others. 90% of people sleep between 6 and 9 hours, however:

- Each individual has their own sleeping pattern
- Sleeping patterns may change, or vary, according to health and age
- Identifying and respecting your sleep pattern is a condition for good performance



Jet lag can affect sleep. This common problem is a difficulty adjusting to time zones. It is unavoidable following rapid travel over three to four time zones and it is exacerbated by:

- Stress
- Over eating
- Dehydration
- Increasing age
- Travelling east
- Sleep deprivation
- Excessive alcohol consumption

Fatigue

When people are suffering from fatigue, their ability to carry out tasks can be impaired. During flight operations, reduced alertness or performance due to fatigue can pose serious risks to safety.

Fatigue usually results from lack of sleep or disruption of normal sleep patterns. However, many other factors can also contribute to fatigue:

Sleep loss:

- Less than the individual needed sleep in the last 24 hours
- Shortened rest periods
- Reduced sleep quantity and quality
- Cumulative sleep loss

Continuous hours awake: more than 17 hours since last major sleep period

- time since awakening
- length of duty day

Disruption of circadian system: working in opposite direction to your home body clock time

- Crossing multiple time zones (jet lag)
- Working between midnight and 6 a.m.
- Getting up very early/coming home late (late bedtime)

Workload intensity: Work intensity or continuous time doing a job

- Multiple legs in succession
- Long duty periods



- Illness; and
- Side effects of medication, alcohol

Symptoms and effects of fatigue

Symptoms may not be noticed when stimuli such as noise, physical activity, caffeine, nicotine, thirst, hunger, excitement, and interesting conversation are present. However once the stimuli are gone fatigue symptoms tend to manifest themselves.

- Eyes going in and out of focus
- Persistent yawning
- Wandering or poorly organized thoughts
- Spotty short term memory
- Worsened mood
- Lack of concentration

Possible consequences at work

- Slower reaction time
- Reduced motor skills and coordination
- Impaired judgment, reduced situation awareness, more difficulty or slow decision making (reduced flexibility)
- Loss of situational awareness resulting in an excessive focus on specific tasks
- Other effects are decreased work efficiency, degraded Crew coordination, reduced motivation, decreased vigilance, and increased variability of work performance.

Fatigue preventive strategies

It is of utmost importance to execute flight operations as alert as possible. Negative occurrences, such as sleep disturbance and/or circadian disruptions, may be successfully counteracted if proper preventive measures are taken. The following recommendations are general and have to be adapted to one's own need:

- Restful sleep requirements ("Good sleep habits")
- Protect your individually required sleep time
- Keep a regular sleep/wake schedule (when possible)
- See for a suitable sleep environment (shades, lower temperature, use earplugs if necessary etc.)
- Develop and practice a regular pre-sleep routine
- Light snacks if hungry



- No alcohol, black tea or caffeine before bedtime (Alcohol induces sleep, but has a negative effect on the sleep quality)
- No exercise before bedtime
- If you don't fall asleep within 30 min, get out of the bed. Don't toss and turn.

Life style

- Practice active ways to relax after work
- Do regular physical activity
- Coordination before and between flights

Flight duty must be commenced in good physical and mental condition, well rested with appropriate personal conduct with regard to sleep, suitable nutrition and consideration of the effects of medicaments, alcohol, caffeine, nicotine etc. Get as much sleep as possible prior to the trip. For night-flights a preventive afternoon nap is highly recommended.

Preventive strategies during a short layover (<3 days)

- Try to sleep within 24 hours as much (one or repeated sleep phases) as in a normal 24 hour phase at home
- If the circumstances permit, sleep if you are sleepy
- Try to maintain the sleep/wake rhythm of original time zone

General countermeasures inflight:

- Give preference to light food and high protein meals, avoid high fat and high carbohydrate food
- Drink plenty of fluids especially water
- Caffeine can help counteract noticeable fatigue symptoms
- Crew rest (bunk) if planned

2.27 IMSAFE

IMSAFE is a mnemonic used by some aircraft pilots to assess their fitness to fly. The IMSAFE checklist consists of assessing whether *I am I free from factors* that could affect my physical or mental capacity to operate safely. Although the job function is different, the IMSAFE checklist is equally applicable to a Cabin Crew:

- **I**llness
- **M**edication
- **S**tress



- Alcohol
- Fatigue
- Eating deficiencies

2.28 FATIGUE RISK MANAGEMENT

A Fatigue Risk Management System (FRMS) is a data-driven means of continuously monitoring and managing fatigue-related safety risks, based on scientific principles and knowledge as well as operational experience, which aim to ensure that relevant personnel are performing at adequate levels of alertness. Cabin Crew should be aware of the Fatigue risk management program within their airline and when and how to report fatigue.

2.29 PERFORMANCE-BASED REGULATORY APPROACH

FRMS is an enhancement to prescriptive flight and duty time limitations (FTLs). It allows an operator to adapt policies, procedures and practices to the specific conditions that create fatigue in a particular aviation setting. Operators may tailor their FRMS to unique operational demands and focus on fatigue mitigation strategies that are within their specific operational environment.

As in Safety Management Systems (SMS), the FRMS relies on the concept of an “effective reporting culture” and active involvement of all stakeholders where personnel have been trained and are constantly encouraged to report hazards whenever observed in the operational environment. Unlike prescriptive FTL, an FRMS needs to emphasize the shared responsibility between management and individual Crew members within an operation, to manage fatigue risks.

2.30 IMPLEMENTING FRMS

Just as SMS, FRMS is a management process built on organizational policies and procedures that implement a systematic approach to fatigue management. This ensures that FRMS is an integrated network of people and resources performing activities designed to minimize fatigue in the operational environment.

It is important to point out that there is no “off-the-shelf” version of an FRMS; each operator will need to develop an FRMS appropriate to its organizational and operational specificity and the nature and level of the fatigue risk(s).



2.31 IMPLEMENTATION GUIDE FOR OPERATORS

The FRMS Implementation Guide for commercial aircraft operators marks the collaboration between IATA, ICAO and the International Federation of Airline Pilots' Associations (IFALPA) to jointly lead and serve industry in the ongoing development of fatigue management, using the most current science. It presents the common approach of pilots, regulators and operators to the complex issue of fatigue.

2.32 FATIGUE RISK MANAGEMENT SYSTEMS (FRMS) GUIDE

The Fatigue Risk Management Systems (FRMS) Guide for commercial aircraft operators has been jointly developed with ICAO and the International Federation of Airline Pilots' Associations (IFALPA). It presents the common approach of pilots, regulators and operators to the complex issue of fatigue. This information in this guide is likewise applicable to Cabin Crew. The FRMS guide is available as a free download: <http://www.iata.org/publications/Pages/frms.aspx>

The FRMS Implementation Guide includes valuable insight into the methodology and framework for implementing an effective fatigue risk management program and an explanation of the science supporting it. For more information, please contact frms@iata.org

To access the IATA White Paper on FRMS, go to:

http://www.iata.org/whatwedo/ops-infra/Documents/FRMS%20White%20Paper_2013.01.pdf

2.33 FATIGUE AWARENESS AND PERSONAL MITIGATION STRATEGIES (FAMS)

IATA has released the Fatigue Awareness and Personal Mitigation Strategies (FAMS) eLearning course. It consists of one base module and three separate job-specific modules for Flight, Cabin Crew and Maintenance Personnel. Please see: <http://www.iata.org/training/courses/Pages/talp54.aspx>. A demo is available on the sidebar.

2.34 FLIGHT TIME, FLIGHT DUTY PERIODS AND REST PERIODS

Regulations specifying the minimum limits applicable to flight time, flight duty periods and rest periods for Cabin Crew are usually approved by national civil aviation authorities. The prime objective of flight time duty limitations and subsequent rest periods is to ensure that Crew members



are adequately rested at the beginning of each flying duty period and subsequently during the flight, and are sufficiently free of fatigue so that they can operate in all normal, abnormal and emergency situations.

2.35 FLIGHT DUTY PERIOD

A flight duty period is intended to cover a continuous period of duty, which always includes a flight, or a series of flights. It includes all duties a Cabin Crew may be required to carry out from the time of reporting for duty on the day of a flight or series of flights, until completion of all duties relating to the flight or series of flights.

2.36 REST PERIODS

The definition of a rest period implies an absence of duty and is intended to provide adequate time for rest following a flight or series of flights. Airlines should ensure that the procedures are followed to ensure that Cabin Crew do not exceed their flight time limitations and that adequate controls are in place to ensure that Cabin Crew are not assigned duties during required rest periods. Cabin Crew have a responsibility to ensure that they use their rest periods to rest.

2.37 INFLIGHT REST FACILITIES

Airlines should comply with their regulatory requirements to provide adequate inflight Crew rest facilities.

2.38 LIMITATIONS

When establishing duty times, the size of the Crew complement and the tasks to be performed should be taken into account. Where rest facilities are provided in the aircraft in such a way that a Crew member may have horizontal rest and a degree of privacy, flight duty periods may be extended.



2.39 POSITIONING

Time spent by Cabin Crew positioning or deadheading to or from duty assignments is not considered to be a part of a rest period.

2.40 FLIGHT CREW AND CABIN CREW RELATIONSHIP: ONE TEAM - ONE CREW

Team Performance: Each Crew member is a member of the team with a specific role and tasks. Great team performance depends on synergy. Synergy is a medical technical term that means: working together. When in synergy, the performance of a team is higher than the sum of the individual performances. Conditions for synergy include:

- A shared goal
- A clear Crew structure
- Clear task allocation
- Team spirit
- Good leadership

The roles of Cabin Crew on board are twofold: The safety role, and the customer service role. At times there is a conflict between the two roles which can have implications on performance.

The structure of the Cabin Crew ensures that Crew members have specific roles, and very specific duties. The application of good CRM within a Crew creates the right balance for the Crew to work as an effective team. In order for a team to be effective, they must be able to talk to each other, share information, listen to each other and be assertive, when necessary.

In every effective team, there are leaders and followers. Followers are not sheep following blindly. Followers play a complimentary role to leadership by supporting the leadership. Every effective leader needs the support of their team. Differing age groups require varying styles of leadership. In CRM it is vital to introduce appropriate leadership styles for the Crew to adopt. This helps to build and strengthen Crew leadership skills.

Situational Awareness is important at all times and CRM highlights the human factors elements that could contribute to incidents and accidents. Situational awareness amongst the Crew improves safety. CRM addresses detecting an error in the early stages and correcting or controlling it.



2.41 HUMAN FACTORS

For Cabin Crew, Human Factors is about understanding how Crew use equipment, interpret policies, work with policies and manuals, and operate within their working environment. More importantly, it is also about their relationship and interaction with other Crew members and work colleagues.

ICAO defines Human performance as the human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations. More information on human performance can be found in the following documents: Human Factors Digest 15 – Human Factors in Cabin Safety, Human Factors Training Manual (Doc 9683) and Cabin Crew Safety Training Manual (Doc 7192 Part E-1) third edition, scheduled to be released in 2014. To obtain copies of these documents, please visit: <http://store1.icao.int>

Cabin Crew should be provided with an understanding and awareness of the human factors that can potentially lead to errors. Key components of Human Factors awareness training are also often referenced as the Dirty Dozen. These include (in no specific order of importance) the: lack of communication, distraction, lack of resources, stress, complacency, lack of teamwork, pressure, lack of awareness, lack of knowledge, fatigue, lack of assertiveness and norms (Norms meaning workplace practices, workplace culture, can be both good and bad or safe and unsafe). Awareness of these components increases the understanding on how humans including Cabin Crew can contribute towards accidents and incidents. However, the objective of this awareness and learning is for the Cabin Crew to understand this and act accordingly towards mitigation measures that both reduce and capture human error.

IOSA has provisions pertaining to training in human performance which typically includes the basic human factors concepts and Crew resource management.

CAB 2.2.8 If the Operator conducts passenger flights with Cabin Crew, the Operator shall ensure Cabin Crew receive training in human performance to gain an understanding of the human factors involved in conducting Cabin Safety duties and coordinating with the Flight Crew during the execution of on board emergency procedures. Such training shall be included in the Cabin Crew initial and re-qualification training courses, and in the recurrent training course, on a frequency in accordance with requirements of the Authority, but not less than once during every 24-month period. **(GM)**

ICAO defines Human performance as the human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations. More information on human performance can be found in the following documents: Human Factors Digest 15 – Human Factors in Cabin Safety, Human Factors Training Manual (Doc 9683) and Cabin Crew Safety Training Manual (Doc 7192 Part E-1) third edition, scheduled to be released in 2014. To obtain copies of these documents, please visit: <http://store1.icao.int>



2.42 CREW RESOURCE MANAGEMENT

Crew Resource Management (CRM) is efficient and effective communication, cooperation and coordination. Its objective is to:

- Promote and maintain a safe operation at all times
- Promote effective and efficient decision making
- Mitigate and capture human error
- Increase the chance of survival in an incident or accident
- Manage effectively and efficiently all available resources (human or physical)

To promote CRM Crew members should understand each other's roles and responsibilities possess an excellent understanding of their Airline's safety and security policies and procedures, effectively communicate with each other, cooperate and coordinate their efforts and resolve or work through any differences or conflicts.

CRM is a system of applying human factors concepts to improve Crew performance, and, subsequently, improve safety. Effective CRM results in all Crew members functioning as a team, rather than a collection of technically competent individuals. High technical proficiency does not guarantee safe aircraft operation in the absence of effective Crew coordination.

Operators aim to encourage appropriate contributions from all Crew members to ensure a consistently high level of safe and efficient procedures, together with service excellence. Training or development may not cover every possible scenario which Crew may face.

Crew Resource Management (CRM) is an essential component of safety training. It allows airlines to influence the way that Cabin Crew and Flight Crew can work more effectively together, by providing the necessary technical and behavioral skills necessary for each to know what to expect from their fellow Crew members in any given situation. It is recommended that CRM form an integral part of initial and recurrent/refresher Cabin Crew training programs.

The following best practices should be taken into consideration when formulating effective CRM programs:

- Standards for Human Factors and CRM for Cabin Crew to be combined with Flight Crew
- Specialist trainers should be used and these trainers should undergo specific training on CRM
- Check flights/audits to be set to measure whether training methods are carried out in flight
- Guidelines on all training to be designed with the specific needs of the carrier being taken into consideration (i.e. cultural training)



- When an incident occurs on board, Airlines should consider using these as case studies in future CRM training
- Encourage Crews to talk about incidents and share views at Cabin Crew pre-flight briefings
- Build a trust between Crew and management where people feel comfortable to “open up”
- Role play simulated flights where everyone has a role to play
- Passengers on such flights to be given card with scenarios to enact
- Conduct a full debriefing to be used as a learning exercise and not as criticism of what could have been done better
- List all key topics from the debriefing to be included in future case studies

2.43 COMMUNICATION

Communication is essential for safe operations. Appropriate and timely decisions depend on both Flight Crew and Cabin Crew communications. Effective and efficient communication between all Crew members is the appropriate, constant, timely and unrestricted exchange of information. Full free and unrestricted flow of information should always be encouraged. However, Cabin Crew hesitancy to contact the flight deck remains common. To promote effective communication and decision making Cabin Crew should be aware of any situation that appears unusual or abnormal and report this to the Flight Crew. The transmitting of such information should be clear, concise and factual. For example, if a Cabin Crew sees “smoke” they should not report that they see “a fire”. Cabin Crew should also listen and acknowledge reception of the information. Cabin Crew should seek clarity and details as required: What? Where? How? When? And as appropriate, provide ideas and solutions. ABC’s of communication to and from flight deck:

A= Appropriate

B= Brief

C=Clear and Concise

Communication via the Interphone

Cabin Crew should be competent in the use of the interphone and procedures used for calling the flight deck, and handling calls from the flight deck and between members of the Cabin Crew under normal, abnormal and emergency situations.

Read back instructions

Read back instructions are a good communication strategy for both face to face and interphone communications to ensure effective and correct communications. For example, when the Flight Crew



communicates a message, the Cabin Crew must read-back the instructions to prevent error. This method is a means of confirming information, ensuring it is accurately understood.

For example: if the Pilot-in-Command warns the Crew that turbulence will be encountered in 15 minutes, the Cabin Crew may understand 50 minutes, leaving them less time than they think to secure the cabin. When the Cabin Crew read-back, the instructions and state 50 minutes the Pilot-in-Command will hear the error and reconfirm: No, 15 minutes, 1-5.

Cooperation and coordination

Effective cooperation and coordination is teamwork. High mutual assistance, low discord and timely communication and feedback all contribute towards effective cooperation and coordination. Cooperation and coordination assist Crew to function effectively, make decisions and mitigate problems as they arise

2.44 THREAT AND ERROR MANAGEMENT

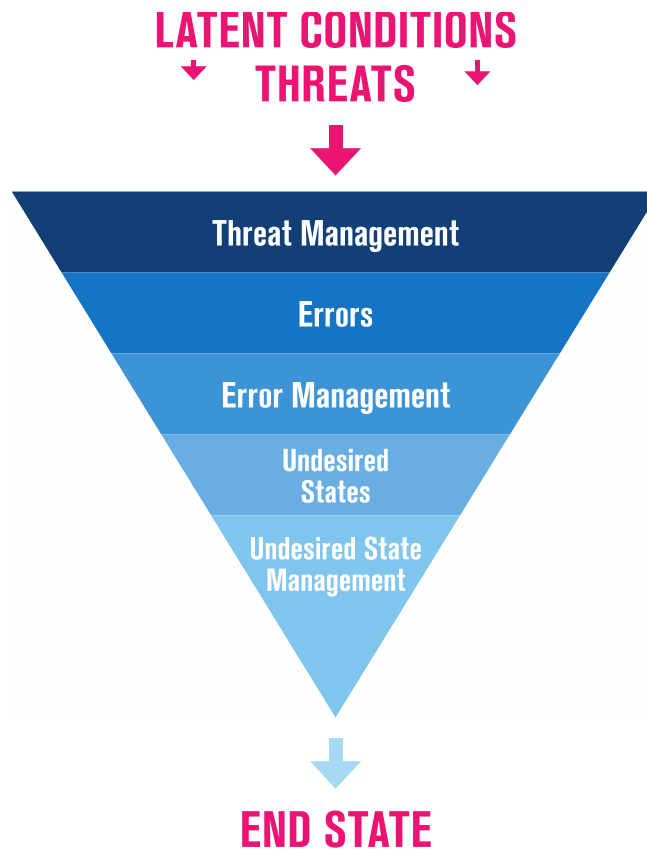
The Human Factors Research Project at The University of Texas in Austin developed Threat and Error Management (TEM) as a conceptual framework to interpret data obtained from both normal and abnormal operations. For many years, IATA has worked closely with the University of Texas Human Factors Research Team, the International Civil Aviation Organization (ICAO), member airlines and manufacturers to apply TEM to its many safety activities.

Threat and Error Management Explained

According to the TEM framework, threats are defined as events or errors that occur beyond the influence of the Crew, that increase operational complexity and which must be properly managed to maintain acceptable margins of safety. Threats are generally categorized as being environmental or organizational in nature. In this analysis, threats were categorized based on whether or not the sources of operational pressure were internal or external to the airline. This analysis includes separate TEM breakdowns for the sources of pressure experienced by the Flight Crew and those experienced by the Cabin Crew. IOSA defines Threat and Error Management as the actions taken by the Flight Crew (Cabin Crew) to reduce threats or manage errors.



Threat and Error Management Framework



Latent Conditions: Conditions present in the system before the accident, made evident by triggering factors. These often relate to deficiencies in organizational processes and procedures.

Threat: An event or error that occurs outside the influence of the Flight Crew, but which requires Flight Crew attention and management to properly maintain safety margins.

Cabin Crew Error: An observed Cabin Crew deviation from organizational expectations or Crew intentions.

Undesired Cabin/Aircraft State (UCAS): A Cabin Crew induced cabin / aircraft state that clearly reduces safety margins; a safety- compromising situation that results from ineffective threat/error management. An undesired aircraft state is recoverable.

End State: An end state is a reportable event. An end state is unrecoverable.

Distinction between “Undesired Cabin / Aircraft State” and “End State”: A door that is not disarmed (when it should have been) is recoverable. This is a UCAS. An inadvertent slide deployment is unrecoverable. Therefore, this is an End State.



2.45 BRIEFINGS

The pre-flight briefing is an important component to flight preparations. Communication and coordination between the Flight Crew and Cabin Crew is crucial and is an integral part of specific normal, abnormal and emergency procedures. A joint briefing enhances the One Team – One Crew concept and enhances the team/Crew spirit between all members of the Crew in general and especially between Flight Crew and Cabin Crew; this in turn has a positive impact on the safety of the flight. A process would be necessary to ensure a Flight and Cabin Crew coordination briefing prior to each flight addresses relevant safety subjects (e.g., sterile flight deck, security, aircraft technical issues, Flight Crew incapacitation, cabin depressurization, on board fire, emergency evacuation, forced landing or ditching.)

2.46 FLIGHT CREW TO CABIN CREW BRIEFINGS

Normally State regulations require a Crew member pre-flight briefing. It is recommended that, when operationally possible, for the pre-flight briefing conducted by the Pilot-in-Command involve **all Crew members**. When joint briefing sessions are not possible, the Pilot-in-Command must brief the SCCM who will then brief the Cabin Crew prior to each flight. This briefing should include as a minimum:

- Anticipated weather and anticipated flying conditions (i.e. turbulence)
- Expected flight time and altitudes
- Any defective/inoperative equipment which could affect the flight/cabin service
- Any other items such as a short taxi time, PA translation requirements, etc. deemed necessary
- Flight deck door procedures and sterile flight deck procedures
- Security procedures

The SCCM should also review the following items with the Pilot-in-Command, as applicable:

- Cabin Crew complement
- Taxi time
- Special handling of certain categories of passengers such as prisoners with escorts
- Announcements and if there is a requirements for translation by Cabin Crew
- Service to Flight Crew
- Any additional information necessary for the flight (including information on inoperative equipment, service items on board or abnormalities that may affect the flight).



2.47 CABIN CREW BRIEFINGS

The operating SCCM is responsible for conducting the pre-flight safety briefing. The operating SCCM cannot delegate the pre-flight briefing. This task typically includes, but is not limited to:

- Check that required minimum number of Cabin Crew is present
- A customized briefing for the aircraft type
- The assignment of Cabin Crew positions, duty stations, emergency duties and working positions (service)
- If applicable the distribution of emergency equipment checklist or equipment check responsibilities
- Information on safety demonstration procedures
- The assignment of duties to individual Cabin Crew, such as public announcements, Cabin Crew stations, and the handling of special category passengers
- Review of selected communication procedures
- Review of selected emergency procedures and equipment
- Review of selected safety and security procedures
- Destination-specific information
- Meteorological information
- Cabin defects
- A service briefing in compliance with the in-flight service manual

Some of these items are obtained from the Flight Crew as part of a joint Flight Crew-Cabin Crew briefing. However, if a joint briefing does not take place the information should be disseminated by the Senior Cabin Crew.

In order to ensure the smooth running of the flight, it is recommended that the SCCM also review with the Cabin Crew the service plans for the flight, including time schedule for the meal service, special meal requirements, serving of meals in the flight deck, Crew rest schedules etc.

It is important to communicate all required information and other relevant matters to the other Cabin Crew, if additional information becomes available (e.g. changing meteorological information).

Briefings may be conducted, but not limited, to the following places:

- In the briefing room before departure from the base
- In the aircraft cabin, with no passengers on board
- In a suitable place before leaving the hotel, or in the Crew bus to the airport



A Cabin Crew briefing must be conducted before the first departure of the day. When flight deck Crew and Cabin Crew are not following the same flight schedule and transit passengers are on board, the Pilot-in-Command should brief the SCCM, who in turn briefs the rest of the Cabin Crew.

SUMMARY

To improve flight safety and promote efficient team work:

- Use briefings to encourage communication and teamwork, and to build a rapport amongst Crew members. A good briefing will result in a high performing team.
- Follow the “ABC” rule of communication:
 - A – Appropriate
 - B – Brief
 - C – Clear and concise
- Following Standard Operating Procedures ensures that all Crew members are familiar with the flight standards and expectations
- Communicate and cooperate with, other Crew members, maintenance personnel, catering staff, and ground staff
- Communicate with passengers, and make them feel comfortable and able to communicate with the Crew

2.48 PASSENGER SAFETY BRIEFINGS

Passenger safety briefings promote safety and are conducted and completed pre-take-off, pre-landing and in preparation for emergency landings.

2.49 SAFETY ANNOUNCEMENTS

It is important that passengers understand the safety announcements made on board. Airlines should therefore take into account the passenger demographics when determining the languages used for announcements by Cabin Crew and where necessary employ the use of translators or video. Announcements should be clear, paced and able to engage passenger attention.

2.50 PRIOR TO DEPARTURE

On each flight prior to push back from the gate the Cabin Crew must brief passengers to:



- Stow their carry-on baggage
- Ensure chair table and seat back are in full upright and locked position (or chair table stowed)
- Seatbelts securely fastened
- Permitted use and/or prohibition and stowage of PEDS (as applicable to State regulations and operator policies)
- Briefing on the over-wing emergency window exit for passengers seated adjacent to self-help exits
- Open window blinds (as applicable to regulations). On aircraft equipped with dimmable windows/electronically dimmable windows (EDW) it is recommended for Cabin Crew to set and block the EDWs in full clear for taxi, take off and climb up to 10,000 ft. From that altitude on the Cabin Crew could unblock the EDWs for each passenger to operate.

2.51 BRIEFING OF PASSENGERS OVER-WING EMERGENCY WINDOW EXITS

Airlines should have clear policies for seating passengers in rows adjacent to emergency exits. Check-in agents need to be aware of these policies. As per local regulatory requirements, one of the many pre-flight tasks of the Cabin Crew is to brief the passengers seated in the over-wing emergency exit rows. The Cabin Crew performs this same routine task prior to every flight. But although it is a routine, Cabin Crew should listen, observe, and assess the passenger while giving instructions. From this they can gauge the passenger's reactions and answer any questions they may have.

Time is critical during an emergency, and passengers seated adjacent to over-wing exits play a very important role in assisting the Crew during an evacuation. All passengers must act according to the Crew's verbal commands during the evacuation process. The reaction of passengers seated in an over-wing emergency exit row is even more crucial. The Crew commands will vary depending on many factors, such as the nature and location of the emergency, potential fire, and other dangers outside or inside the aircraft. Therefore, it is vital that passengers seated in the over-wing emergency exit rows understand how and when to open specific exits and, perhaps more importantly, when not to open them.

Air operators should develop procedures for Cabin Crew to conduct an over-wing emergency exit briefing (briefing card, video or one-on-one as applicable to the regulations of the authority). The benefit of a one-on-one interaction during the over-wing briefing is that Cabin Crew can assess if the passenger has really understood what is expected of them should the need for an evacuation occur. They can also determine if the passenger should indeed occupy this restricted seating.



Prior to departure the SCCM should ensure that the Cabin Crew have briefed passengers seated at an over-wing emergency window exit on:

- **When** to use the exit: only when advised by a Crew member or upon hearing the command to evacuate
- **How** to open the exit (and perhaps as important when not to, e.g. in case of fire)

Should a passenger not be comfortable with, or capable of operating the emergency exit, or cannot perform the procedures they were briefed on, or if the Cabin Crew feel that the individual briefing information has not been clearly understood by the passenger (language barrier) the Cabin Crew should assist in reseating the passenger to another seat.

2.52 PRIOR TO TAKEOFF

On each flight Cabin Crew must provide a safety briefing (via demonstration or video) to all passengers prior to takeoff on the following safety and emergency procedures:

- Ordinance signs
- Seatbelts
- Escape path lighting
- Emergency exits
- Passenger Safety features card (where to find it and recommendation to review it prior to takeoff)
- Life vests (when applicable, i.e. over 50 nautical miles or more room shore and as per regulatory requirement)
- Oxygen system (and to secure their own mask prior to assisting another person) When demonstrating these exits during a Video Briefing it is recommended that Cabin Crew should be present in their assigned “demo position” in the cabin to point out these exits and be vigilant in the cabin to ensure that the safety video is being played.
- Also it is important to remind passengers on the ability to bring any safety concerns to the attention of the Cabin Crew. Passengers can be a great source of information, and may sometimes be the first to bring information regarding an unusual odor, for example, to the Crew member’s attention. Always take into account passengers’ remarks regarding:
 - The cabin (noise, fumes, smoke, fire, loose objects etc.)
 - Other passengers behavior
 - Aircraft exterior (wings, fuselage etc.)
 - Outside environment (runway, weather etc.)

Cabin Crew should follow up any reports from passengers regarding anything unusual, and ensure that the SCCM and Flight Crew are informed. Operators should encourage passengers to



communicate with the Cabin Crew; some airlines include an announcement on this matter in the passenger briefing, sample: *“If you have any safety concern during the flight, please do not hesitate to bring it to the attention of a Crew member”*. Something as simple as this could encourage passengers to voice an important concern.

Cabin Crew attempt to capture the passenger’s attention for the pre-flight safety briefing. Some Airlines have designed very creative pre-flight safety briefing videos in order to engage the passenger’s attention to the important safety information. Nevertheless, it is the passenger’s choice as to whether to watch the safety demonstration or video or not but Cabin Crew should not replace the safety briefing by simply asking the passenger(s) if they are familiar with the safety/emergency procedures, equipment and exits of the aircraft.

2.53 PRIOR TO LANDING

On each flight prior to landing the Cabin Crew must brief passengers to:

- Stow their carry-on baggage
- Ensure chair table and seat back are in full upright and locked position (or chair table stowed in armrest/other assigned stowage as applicable)
- Fasten seatbelts
- Permitted use or prohibition and stowage of PEDS (as applicable)
- Open window blinds (as applicable to regulations). On aircraft equipped with dimmable windows/electronically dimmable windows (EDW) it is recommended for Cabin Crew to set and block the EDWs in full clear.

Investigations into numerous accidents have identified that Crew commands to passengers to leave their carry-on baggage behind during an emergency evacuation is not always the optimal time for passengers understanding to adhering to critical safety information or instructions as stress levels are high and the noise level in the cabin could be high. In Canada, it is recommended that on each flight prior to landing, or in the event of a planned emergency landing, to include clear direction to leave all carry-on baggage behind during an evacuation. For more information please see Transport Canada Advisory Circular (AC 700-012) Passenger Safety Briefings:

<http://www.tc.gc.ca/media/documents/ca-opssvs/700-012.pdf>

2.54 PASSENGER SAFETY FEATURES CARDS

Oral briefings must be supplemented with Safety Briefing Cards, which must be pertinent only to that type and model of aircraft and consistent with the airlines procedures. There should be sufficient Safety Briefing Cards for the number of passengers. The information on the cards should be



consistent with the information contained in the air carrier's manuals and as per regulatory requirements. When aircraft equipment is substantially different, even with the same model of aircraft, the air carrier should provide Safety Briefing Cards specific to that aircraft. In addition, the briefing cards should be designed to be understood by passengers who are totally unfamiliar with aircraft and safety equipment, and who may have a limited understanding of any of the languages used. Briefing cards must show the most common method used to operate the emergency exits in an emergency. They must also show other instructions necessary for the use of emergency equipment.

2.55 DESIGN AND LOCATION

It is recommended that any safety literature on board, passenger safety features card, contain pictorial instructions. The passenger Safety Briefing Card must be designed and located so that the seated passenger will be able to see and have access to the card when it is placed in its normal location about the aircraft. The passenger Safety Briefing Card should be large enough so that when placed in its normal location aboard the aircraft, the passenger seated for taxi, take-off, and landing will be able to visually locate and identify the card. It should not be possible for the card when in its normal location, to slip out of sight of the passenger. The card should have an eye-catching title or symbol identifying itself as safety and emergency instructions for passengers. The mode of presentation should be diagrammatic or pictorial, making written information to the extent possible unnecessary. The method used to depict equipment and action can be pictures of people, diagrams, drawings, words, and combinations of these.

When developing Safety Briefing Cards it is recommended that Airlines:

- Use international symbols. All depiction should be easy to understand and not complex. Cards should also be interesting and attractive so passengers will want to read them. For example, a multi-colored card, which had pictures and drawings, will be picked up and read more often than a black and white printed card.
- Use standard colors:
 - Green (Actions Passengers Can Do)
 - Red (Actions Passengers Cannot Do)
- The following is normally included, but is not an exhaustive list of typical information contained in the card: Seat belts, emergency exits (location and operation) and egress assistive devices such as slides or slide rafts, bracing positions, if applicable, emergency escape path lighting, life jackets (personal flotation devices), if required, passenger oxygen masks, smoking or portable electronic device restrictions etc.
- If a multi-step process is incorporated into the card (such as donning a life vest or detaching a slide), all operational steps should be depicted.
- Use standard symbols when highlighting an exit or an action to be followed. It is recommended that emergency exits be highlighted in green in accordance with those used



on the ground in terminal buildings. When highlighting an exit that should not be used in certain situations, for example an over-wing exit on water, the exit should be highlighted in red with a cross going through it.

- Passenger Safety Briefing cards should contain only information that is essential for safety. For example, advertising, schedules, promotional information is not safety related and should not be on the cards.

2.56 SAFETY EQUIPMENT CHECK

Prior to boarding of passengers, Cabin Crew should check all Cabin Safety communications and other equipment to ensure that they are in full working order. It is recommended that a checklist be used for this purpose, and adapted to each aircraft type and duty station. In addition it is important for Cabin Crew to check their Cabin Crew station and assigned seat and seatbelt/harness and to check the safety restraints for cut or worn edges, damaged stitching, or excessive wear or chafing to the webbing, inspect lap belts and shoulder harnesses for frayed strap, check the inertia reels for proper operation.

SCCM's should also consult the logbook before each flight. Always advise the PIC as they may wish to transfer items that directly affect the safety of the aircraft or safety equipment, to the Aircraft Technical Log. Once items have been repaired, a Licensed Engineer will complete an "Action Taken" Log entry. Airlines should consult their local/country applicable national authority for the format of the Logbook and to confirm those items, which may or may not be deferred.

2.57 GALLEY CHECKS

The galley should be checked as part of the equipment check. Any defective galley equipment should be reported to prevent possible injury. It should be off-loaded, repaired and returned to service as soon as possible. Galley checks should also include proper use of electrical equipment in the galley and controls for cabin temperature and ventilation.

2.58 REPORTING DEFECTIVE GALLEY EQUIPMENT

Cabin Crew should identify and report any defective galley equipment immediately. It should be off-loaded, repaired and returned to service as soon as possible. Airlines should establish means of recording and tracking damaged or broken equipment to enable repairs to be affected by Engineering during routine turnarounds or during maintenance.



Defective galley appliances or other permanent equipment should be recorded by the SCCM in a Logbook to be kept on the aircraft. Airlines may also wish to establish a system for logging and identifying removable equipment such as damaged catering trolleys and containers so that these items can be removed from the system for repair.

2.59 PASSENGER INFORMATION LIST (PIL)

In order to provide Cabin Crew with necessary information concerning passengers on board and, optionally, about seats blocked for other purposes, it is recommended that Airlines use the Passenger Information List (PIL) as specified in IATA Recommended Practice RP 1716 from the Passenger Services Conference Resolutions Manual:

<http://www.iata.org/publications/Pages/pscrm.aspx>. The list should be produced after final passenger closeout and provided to the Senior Cabin Crew. Where so required, the list may be provided separately for each class and/or compartment of the passenger cabin.

2.60 CABIN CREW POSITIONS FOR BOARDING AND DISEMBARKATION

It is very useful that the Cabin Crew screen passengers during boarding to look for any abnormalities such as sick, intoxicated, and potential unruly passengers situations. Also care should be given to size of hand luggage and how it will fit into the aircraft stowage. During passenger boarding Cabin Crew must ensure that:

- All curtains and dividers are open
- Monitor passenger flow
- Monitor exits and aisle (s) and ensure they remain clear of obstructions
- Monitor restricted rows (e.g. over-wing emergency exit seating)
- Assist passengers and passengers requiring special assistance
- Remain on board until all passengers have disembarked

2.61 COMMUNICATION WITH GROUND STAFF

Effective and timely communication between ground staff and the designated Cabin Crew is essential in all passenger embarkation, disembarkation and during transit stops. Some Airlines require for the SCCM to give clearance to ground staff prior to the commencement of boarding. Other Airlines utilize a “green light boarding” or “precision boarding” policy. This means that boarding starts



automatically at the stated time (as per each aircraft type) at every airport. Ground staff will commence boarding and the Crew understands that boarding starts at XX time, unless the PIC or SCCM advises ground staff otherwise. A deferred boarding decision would usually be for reasons relating to safety or security.

2.62 PRE-BOARDING

Certain passengers with reduced mobility or passengers requiring extra assistance should be boarded and seated prior to the embarkation of other passengers.

2.63 AIRCRAFT SEATING

Airlines should establish and communicate a clear policy regarding seat assignments as aircraft seating arrangements have an important safety function. Normally seat selection is carried out automatically by the check-in agent. However, it is essential that Cabin Crew are familiar with the categories of passengers, which should not be seated in specific seat types or emergency exit rows. Such passengers who have been seated in such areas, and whom Cabin Crew believe might impair an emergency evacuation, should be assisted in moving to another seat.

2.64 PASSENGERS OCCUPYING VACANT CREW SEATS

It is recommended that vacant Crew and Crew rest seats are only assigned to passengers who are airline employees, fully briefed in safety procedures. Airlines should not allow passengers to occupy seats reserved for Crew.

2.65 FUELLING WITH PASSENGERS ON BOARD

Flight Crew will normally be on the flight deck to co-ordinate the necessary precautions and procedures to be observed. However, some regulatory authorities permit for fuelling to take place without Flight Crew on board. When Flight Crew are not on board, the qualified maintenance engineer, and/or the SCCM (who will be positioned in the vicinity of the main boarding door) may undertake these duties.

The Cabin Crew and Flight Crew must be trained in emergency evacuation procedures and rapid deplaning procedures during fuelling emergencies. The aircraft illuminated 'NO SMOKING' signs



must be ON and illuminated. The 'FASTEN SEAT BELT' signs must be OFF and sufficient interior lighting is required to enable emergency exits to be identified. Such lighting must remain ON until fuelling operations are completed.

The emergency lighting master switch should be positioned to 'ARM' prior to commencement of fuelling operations, and remain positioned to 'ARM' until fuelling operations are completed.

The Public Address system must be serviceable. Appropriate announcements should be made instructing passengers to unfasten their seat belts and refrain from smoking. The Cabin Crew should also advise passengers and other responsible staff that fuelling will take place and that they must not operate electrical equipment or other potential sources of ignition (i.e. flashbulbs and/or portable electronic devices – as applicable to State regulations). Fuelling operations and all cleaning activities using electrical equipment within the aircraft must be stopped until conditions permit resumption.

A Senior Cabin Crew, should be at the main cabin door during fuelling, and be responsible for notifying the Refueller immediately should either the presence of any fuel vapor be detected in the passenger cabin or of any other hazard that arises in the aircraft cabin.

The minimum Cabin Crew complement is required to be on board the aircraft. A minimum of one Cabin Crew is to be on board for every 50 passengers, or 50 passenger seats (or fraction thereof as applicable to State regulations) on the aircraft, with at least one Cabin Crew for each separate passenger cabin in the aircraft to communicate the need or to initiate the rapid safe evacuation of passengers if an incident occurs.

Note: Local Airport Regulation may be more restrictive on aircraft with more than 200 seats.

Cabin Crew must always be on board when passengers are on board with one Cabin Crew positioned at each pair of aircraft doors, including the upper deck doors on the B747-400, B747-800 and the A380 aircraft when the upper decks of the aircraft are occupied.

Cabin Crew are required to supervise passengers and to ensure that aisles and emergency doors are unobstructed. (Some aircraft types might require the designation of over-wing exits for evacuation)

Provision for the safe rapid deplaning (if conducted via boarding doors only) or evacuation of passengers in the event of an emergency should be made via the designated fuelling exits. These include at least two of the main passenger doors or the main passenger door plus one emergency exit and preferably at opposing ends of the aircraft. These doors must be constantly manned by a Cabin Crew throughout the fuelling operation. The area outside the designated fuelling emergency evacuation exits should be unobstructed.



2.66 NO-SMOKING POLICY

Passengers should be informed and receive instruction on all restrictions pertaining to on board smoking including when, where, and under what conditions smoking is prohibited. In addition, the company should inform them that their compliance with the “No Smoking” ordinance signs, placards and instructions from the Crew is required at all times. Passengers should also be advised that for their safety, lavatories are fitted with smoke detectors and that tampering with a smoke detector is a serious offence that may lead to prosecution by the airline.

Airlines should undertake all essential safety precautions to bring to passengers’ attention the restrictions on smoking. Such precautions must include announcements over public address systems prior to each takeoff and at regular intervals during the flight. Precautions:

- Installation of smoke detectors in all lavatories to provide an alert of fire;
- Installation of “No Smoking” placards on each side of toilet doors;
- Installation of a “No Cigarette Disposal” placard on or near each paper or linen waste disposal receptacle in all toilets;
- Installation of ashtrays on or near the entry side of all toilet doors
- Passengers can also be made aware via an announcement or either in passenger awareness material or via the IFE that triggering, tampering or disabling a smoke detector is a serious matter subject to a possible diversion of the aircraft, and possibly subject to fines, and in some States arrest.

2.67 ELECTRONIC CIGARETTES

Electronic, simulated smoking materials (cigarettes, pipes, cigars) should be prohibited from use by both passengers and Crew at all times. Operators should not permit the use of any item which could insinuate that smoking is permitted on board aircraft. Permitting the use of these devices on board could result in passengers attempting to smoke real cigarettes (or other smoking products) and result in increased unruly passenger events. They can however be accepted on board in the passenger’s carry-on baggage, for passenger use at destination provided:

- They remain stowed at all times
- Unused in the passenger’s carry-on baggage

Spare lithium batteries: Where the electronic cigarettes are powered by lithium batteries, the requirements of the *IATA Dangerous Goods Regulations (DGR)*, paragraph 2.3.5.9 must also be met. This requires that spare lithium batteries of any type must be carried in passenger carry-on baggage.



Under the current regulations lithium batteries contained in electronic cigarettes may be packed in checked baggage, although it is strongly recommended that they be packed in carry-on baggage.

2.68 ORDINANCE SIGNS

No-smoking sign: On flights where smoking is prohibited, usually the no-smoking sign remains on for the duration of the flight on all no-smoking flight.

Seat belt sign: The Pilot-in-Command will turn on the seatbelt sign for taxi, takeoff, and any time considered necessary (e.g. turbulence). When the seat belt has been turned off, passengers should be advised to keep their seatbelt fastened at all times when seated. Whenever the seatbelt sign is switched on the Cabin Crew must:

- Make a PA to alert passengers of the requirement to fasten and to keep their seatbelts fastened when seated
- Remind passengers to secure infants and children
- Ensure infants are removed from bassinets/cradles and held or are secured in an infant/child restraint device (Note: some recent bassinet models allow the infant to be maintained in the bassinet during turbulence. Check with the manufacturer to ensure proper usage)
- Complete compliance checks (if flight conditions/turbulence levels permit Cabin Crew to do so)
- Some Airlines reinforce these instructions to passengers via use the IFE and automatic PA system
- Portable electronic Devices Sign: Some aircraft are now equipped with ordinance signs that alert passengers as to when a permitted portable electronic device may be used.

2.69 CABIN SECURE

The SCCM should confirm to the Pilot-in-Command that the cabin is secure for pushback and request for permission for the Cabin Crew to close the boarding doors.

2.70 OPERATION OF AIRCRAFT DOORS

Airlines should ensure that they have clear policies and procedures for both Cabin Crew and ground staff with respect to the operation of aircraft doors on arrival and departure, and ensure that areas of responsibility both on the ground and in the aircraft are clearly set out.



Responsibility: Effective communication between staff on the ground and in the aircraft is essential for the operation of cabin doors. Cabin doors, i.e. passenger entrance and service doors, should be operated by qualified staff either from the outside or from inside the aircraft, depending on the aircraft type.

Signals: In order to prevent injury to personnel and damage to the aircraft and equipment due to misinterpretation, only the standard signals must be used to indicate to the Cabin Crew responsible for the door operation that:

- Ground equipment, i.e. passenger steps, passenger loading bridges, passenger transport vehicles (PTVs)/plane mates and galley loading vehicles, are correctly positioned
- The area for the deployment of integral stairways is free from obstruction
- The standard signals to be employed for this purpose are:
 - Knocking at the door
 - Thumbs-up signal

2.71 INADVERTENT SLIDE DEPLOYMENTS

Accidental deployment of evacuation devices represents a great concern for airline operation cost. For more information please see the IATA Inadvertent Slide Deployment Guidelines at: www.iata.org/cabin-safety

2.72 REMOVAL OF GROUND EQUIPMENT FROM AIRCRAFT CABIN ACCESS DOORS

Before removing ground support equipment from cabin access doors, the operator should advise the Cabin Crew. Ground support equipment must not be removed until the aircraft door has been closed. No cabin door (the door that allows external access to the passenger cabin) should be opened, closed or left open without suitable ground equipment correctly installed. Exceptions: some airlines may permit doors to be opened, provided a full size door net is installed on the door.

Unless an emergency situation requires the slides to be deployed, cabin doors should only be opened provided a suitable piece of ground equipment is engaged to the doorway area, such as aircraft steps, high-lift truck etc. Before opening an aircraft door under normal operations, Cabin Crew should:

- Request authorization from the Pilot-in-Command, who will be responsible to advise ramp staff that ground equipment is required



- Assess outside conditions to verify that ground equipment is in place (stairs or bridge) prior to door opening
- Once the installation of the ground equipment is confirmed by the ramp staff, Cabin Crew must ensure door is disarmed
- Move door handle slowly to the full and open position
- Push door out fully until locked against fuselage using assist handles and hand grips (Exception on the A380 the door opens automatically after pushing a designated switch)

In the event that ground equipment is not available and the cabin requires cooling due to excessive hot temperature, effort should be made to have the air conditioning turned on. In the event that power to the aircraft cannot be provided, it is recommended that authorization from the Pilot-in-Command be required before opening a door and the following safety procedures be performed:

- Open door as per normal procedures using extreme caution to secure self on the inside of the aircraft
- Immediately and with caution attach the door barrier safety strap across door
- Ensure no items are placed on the floor at the door vicinity
- Guard the door at all times
- When closing the door, extreme caution must be used

Note: Although the use of door barrier safety straps on open doors is promoted as a visual barrier, they do not provide fall protection and are intended only as a visual warning. As a reminder, open aircraft doors must never be left unprotected once opened by Cabin Crew. Some Airline policies and procedures require that a full door safety net must be fitted by engineering if a door is to be opened with no platform in place.

2.73 PREPARATION OF CABIN FOR TAXI, TAKEOFF AND LANDING

Preparation for departure involves a high workload as there are many pre-flight checks and tasks to complete. The Cabin Crew are available during boarding to assist with the carry-on baggage, answer questions, brief and assist passengers who require special attention, and the list goes on.



2.74 CABIN CHECKS

Prior to door closing, taxiing, takeoff and landing, it is recommended that Cabin Crew check the cabin to ensure that: lavatories are unoccupied (and locked if required), and that all closets, compartments and overhead bins are closed. All cabin baggage should be securely stowed under seats or in overhead bins. All passengers should have seatbelts secured, and table trays and seatbacks should be upright and locked. All electronic equipment should be switched off and stowed (as per applicable regulations and the operator policy).

Cabin Crew should also ensure that all galley equipment is stowed and secured including that trolleys/carts are stowed in the appropriate areas. Stowage areas should be closed. Any spillage on galley floors should be cleaned immediately.

2.75 SECURING OF CABIN AND GALLEY

During aircraft movement on ground (pushback and taxiing) and during takeoff and landing, all exits and escape paths must be unobstructed. This means that:

- All carts and all loose items in the galley and the cabin shall be secured
- At over-wing exits, exit seat rows and partition walls, coat hooks shall be free from clothes or other hanging articles
- Lavatories must not be used for storage of excess baggage, galley equipment or cabin equipment
- All cabin baggage shall be placed under the seat, in a closed bin or in a closed stowage compartment

2.76 PREPARATION FOR AIRCRAFT MOVEMENT

Local regulations may supersede the items listed below, however aircraft ready for movement usually means that:

- Preflight Safety Briefing has been performed
- At originating stations and Crew change, emergency equipment has been checked
- Preflight Security Check has been performed
- Crew meals have been loaded (where applicable)
- Passengers have received an exit briefing (when applicable)
- Passenger safety briefing is completed (at gate or during taxi)
- All cabin baggage has been properly stowed and bins are closed



- The way to over-wing exits and exit seat rows are cleared, and coat hooks at these locations are free from articles
- Window shades are open at all exits (or in entire aircraft as per regulatory requirements)
- Blankets are stowed (if applicable and as per regulatory requirements)
- Infant life vests and infant/extension belts have been distributed (if applicable)
- All objects are secured
- Dividers are secured
- Lavatories, Cabin Crew rest compartment, Flight Crew rest compartment and other compartment doors are closed and locked (as applicable)
- Curtains are open and secured
- Galleys, containers, carts and trolleys are secured
- Seatbelts are fastened, all seats in upright position, tables folded and footrests stowed
- All electronic equipment is switched off and stowed (as applicable)
- “Cabin checked” reported to SCCM by the assigned CC
- SCCM has verified number of passengers with PIL (when applicable)
- Aircraft doors have been closed
- Arming of doors has been completed (as per operator procedures)

Note: It is responsibility of SCCM to ensure that cabin, galleys, passengers and CC are ready for aircraft movement. Closing of entry door(s) by SCCM (after communication and coordination with the Flight Crew) indicates that the cabin is ready for aircraft movement.

2.77 SURFACE CONTAMINATION

De-icing and Anti-Icing

Based on atmospheric conditions, including temperature, precipitation, accumulation etc., the PIC or other responsible person (Ground Lead) will decide to deice or apply anti-icing fluid on all critical surfaces of the aircraft.

- Deicing is the removal of any contaminants on aircraft critical surfaces
- Anti-icing is the application of fluids preventing the accumulation of contaminants on aircraft critical surfaces



2.78 CLEAN AIRCRAFT CONCEPT

In order for aircraft to maintain lift (prevent stall) for takeoff, all critical aircraft surfaces (wings, tail, lifting control surfaces, and the fuselage of the aircraft with tail mounted engines) must be free of contaminants such as ice, frost or snow. Cabin Crew should advise the Pilot-in-Command prior to takeoff roll of any:

- Ice, frost or snow adhering to the aircraft structure
- Concerns conveyed by a passenger or other Crew member

2.79 PASSENGER COUNT

In the interests of safety and security, and if not established by other means, Cabin Crew should count the number of passengers on board prior to door closing and relay the count to the Pilot-in-Command in order to ensure security and an accurate load sheet information.

2.80 DISCREPANCIES AND RELOCATING PASSENGERS

There are instances where a headcount or the relocating of passengers may be necessary.

Re-count: In the event of a discrepancy between the passenger count, a count or recount may have to be completed when ordered from the ground staff or by the Pilot-in-Command. Re-counts should be conducted by the Senior Cabin Crew. Count all passengers and start only when boarding is complete. Ensure all passengers are in their assigned seat (an announcement may be required to request cooperation to gain assigned seat for the re-count).

2.81 WEIGHT AND BALANCE

Should a discrepancy exist between the passenger count and load dispatch, Cabin Crew may be required to relocate passengers for takeoff and landing as per the Pilot-in-Command's specific instructions. Usually relocated passengers may return to their originally assigned seat during flight. However, they must return to the specified seat as per the Pilot-in-Command's instructions for landing.



2.82 PORTABLE ELECTRONIC DEVICES (PEDS)

Globally the use of Portable Electronic Devices (PEDs) varies as it is regulated by each applicable national aviation authority. However one thing is constant in the various regulations, the greatest concern is the possibility of interference with aircraft frequencies by the transmitting function of the device at any phase of flight, and particularly at critical phases of flight.

If interference is suspected at any time, the Pilot-in-Command will instruct passengers to turn off all electronic devices. Hearing aids, heart pacemakers, and other implanted medical devices are acceptable at any time during flight. Items such as portable computers, video cameras etc. are considered cabin/carry-on baggage and should be stowed during taxi, takeoff, turbulence and landing. Cabin Crew should inform passengers to turn off and stow mobile phones (as per regulations and the operator's policy) prior to engine start and prior to the commencement of the safety demonstration (live or video) and during refueling (as applicable).

Please note technology advances quickly and the list below is neither complete nor exhaustive. In addition, government authorities have begun the move towards the easement on the use of portable electronic devices by passengers on board aircraft (See EASA, FAA, etc.) and thus the information below is subject to applicability or change as applicable to your local regulations.



Sample List of Prohibited and Accepted Devices:

Acceptable at all times

- Aircraft satellite phone (if equipped)
- One-way pagers (capable of receiving signals only)
- Electronic watches
- Hearing aids
- Heart pacemakers
- Approved electronic medical devices (See Electronic Medical Devices in this section.)

Prohibited at all times

- AM/FM transmitters and receivers (including televisions, radios)
- Two-way communication devices (unless the transmit function is disabled)
- Remote-control devices (customer-owned)
- Personal air purifiers
- Electronic, simulated smoking materials (cigarettes, pipes, cigars)
- Large heavy electronic power devices
- Wireless mouse

Acceptable When Aircraft Door Is Open, or at the Pilot-in-Command 's discretion during lengthy ground delays and when refueling is NOT taking place

- Mobile phones and Smartphones (unless restricted by local regulations)
- Wireless computer/mobile phone accessories
- All portable electronic devices (except those prohibited above acceptable when aircraft boarding door(s) is open)

Acceptable during flight (But usually prohibited during taxi, takeoff, landing and flight operations below 10,000 feet, unless approved for use by the State)

- Any of the above devices that can be switched to a setting where no transmitting signals are emitted, and:
 - Personal Digital Assistants (PDAs), and other two-way communication devices (if transmit function is disabled – e.g., aircraft mode, hospital mode, wireless system off).
 - Computers and printers Modems connected directly to aircraft satellite phones or via wireless internet (where applicable)
 - Digital music players
 - E-readers
 - Electronic cameras (film, digital, video)
 - Customer-owned electronic noise-cancelling/reduction headphones
 - Electronic calculators
 - Portable audio/video players
 - Voice recorders

Acceptable After Landing When Aircraft Has Cleared the Runway and Is Taxiing (Unless restricted by local regulations)

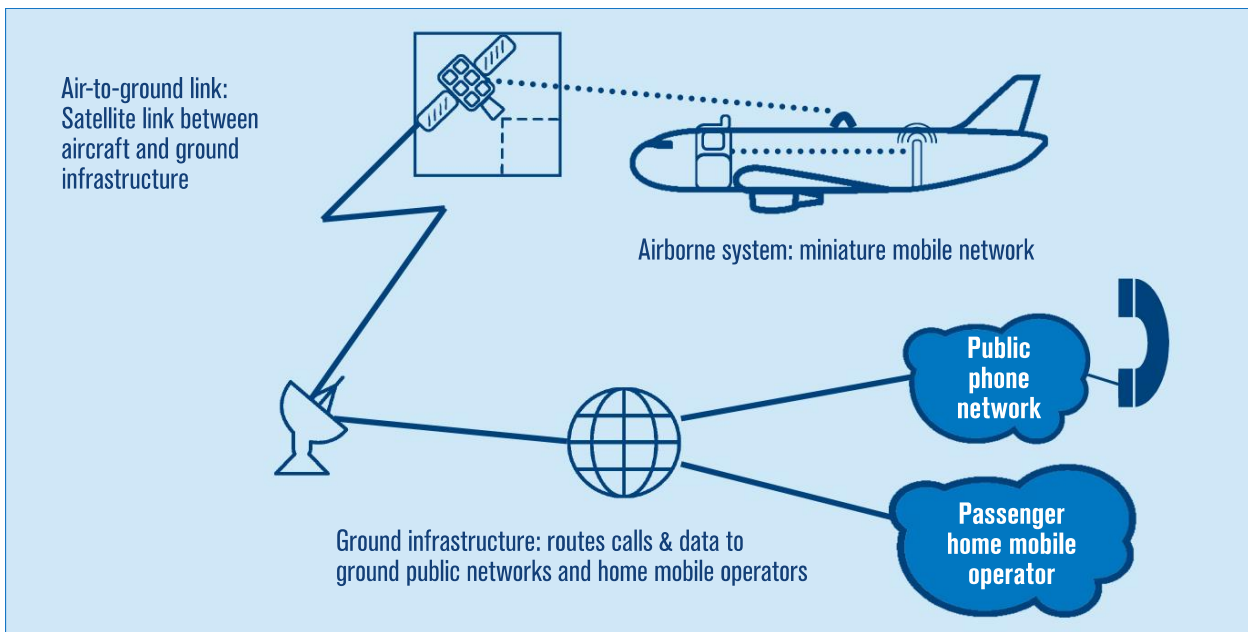
- Mobile phones / Smartphones
- 2-way pagers

2.83 USE OF MOBILE PHONE INFLIGHT

Mobile phone use is currently prohibited during all phases of flight due to potential interference with aircraft navigation systems and/or ground-based mobile phone networks; with some countries/airlines allowing use prior to takeoff until the aircraft door is closed, or after landing once the aircraft door is opened.

A number of technology companies are proposing the use of a Pico-cell system in the aircraft cabin to connect calls via satellite to a designated global ground infrastructure whilst preventing all other cellular communication to the ground.

Pico-cell type system



The Pico-cell system is able to send and receive phone calls, SMS messages and e-mail messages while flying at altitudes above 3,000 meters, or 9,840 feet. Cabin Crew are able to turn off the system or restrict usage to text services like SMS, as they see fit.

Airline wishing to introduce this service should take into account the following considerations prior to implementation. The items mentioned below do not represent an exhaustive list and are intended to provide IATA Member Airlines with the most accurate and up-to-date information possible.

Cabin Operations

To properly manage Cabin Operations, guidelines should be established on:



- Training of Cabin Crew
- Passenger Safety Briefing
- Passenger Information
- Courtesy Guide / Specific Company Policy
- Incident Reporting

Cabin Crew Training

To properly manage passenger expectations, Cabin Crew should receive sufficient training. This includes:

- Understanding the differences in technology
- Transmitting and non-transmitting devices
- Device type that can be used in each phase of the flight
- Implication and restrictions on the use
- Reasons why it can be used only above 3,000 meters
- Courtesy guide and specific company policy
- Procedural variation between aircraft types (if any)
- Human Factors
- Conflict management to de-escalate any event
- Incident reporting

Passenger Safety Briefing

The safety briefing should include information regarding the restrictions on the use of portable electronic devices and the phases of flight the different devices can be used. Methods that should be used to provide information:

- Pre-flight and in-flight announcements
- Safety Cards
- Safety Demonstration Video (if any)

In order not to distract passengers from the safety briefing, information on the mobile phone user guide should be given at a different time.

Passenger Information

To properly manage passenger expectations, basic guidelines on policy, procedures and courtesy should be established. This will allow the Cabin Crew to enforce the procedures in the most prudent manner. It is recommended that the following information is contained:

- Company policy
- Procedures



- Courtesy guide
- User guide e.g. when and how to use the service
- Pricing
- etc.

Methods that could be used to provide information:

- Prior to travel:
- E-ticket passenger information
- Customer mailings – frequent flyers
- Airline websites
- Passenger lounges/gates
- In-flight Magazine:

In-flight magazines are convenient and easily recognized resources for passengers to obtain detailed information.

- Flight Information Video (if applicable)

Company Policy

The following are examples of company policies which could be adopted by the airline:

- During certain times of the day (sleep, dining, etc.), use only text message
- Complaints from other passengers may lead to restrict the service to text message only
- For the passengers own safety, it is important to interrupt conversations to listen to safety critical announcements
- In an emergency the service will be terminated with very little notice
- Prior to landing before reaching 3,000 feet, announcement will be made giving the passenger time to finish his conversation, before terminating the service

Courtesy Guide

In order to minimize human factor occurrences it is recommended to establish a courtesy guide to remind customers to respect other passengers. The items mentioned below do not represent an exhaustive list:

- Phone should be on silent or vibrate mode
- Passenger should not speak more loudly than normal
- Passengers should be especially sensitive when having a long conversation
- Make phone calls only when seated, not while walking in the aisle
- Aircraft toilets are not to be used as phone booths



Incident Reporting

Cabin Crew should be trained to objectively observe and report any events related to the use of mobile phones. Regular reviews will be necessary to evaluate relevant incidents. The reports should be used to:

- Identify safety hazards
- Ensure remedial action to maintain an acceptable level of safety
- Continuous monitoring and regular assessment of the safety level achieved

2.84 FLASHBULBS

Flashbulbs (all types) must not be used on ramp (i.e. outside the aircraft) where fuel vapors may exist, and during fuelling, taxi, takeoff and landing.

2.85 CARRY-ON BAGGAGE

The IATA Baggage Services Manual contains information on the rules and industry-accepted procedures relating to the carriage of baggage: <http://www.iata.org/publications/Pages/bsm.aspx> . For the purposes of this publication the term “carry-on baggage” means unchecked baggage, hand baggage and cabin baggage.

All cabin baggage must be securely stowed. Accident reports indicate that the presence of excess cabin baggage can be a significant factor in passenger survival in accident situations. Unsecured baggage can become dislodge or projectile in accidents (and during severe turbulence). It can also obstruct evacuation routes and exits, where it can delay evacuation of passengers and Crew.

All airlines, with manufacturers, should ensure that sufficient, adequately designed cabin storage facilities are provided on all passenger carrying aircraft. Consideration must be given to weight, volume and aircraft type. All carry-on passenger baggage that cannot be stowed or does not conform to regulations must not be carried in the cabin.

Baggage allowance

Carry-on baggage must be stowed in the aircraft cabin which limits baggage to a size, weight and shape to fit under a passenger seat or in a storage compartment. Cabin baggage should have maximum length of 22 in (56 cm), width of 18 in (45 cm) and depth of 10 in (25 cm). These dimensions include wheels, handles, side pockets, etc. Carry-on items must remain with the passenger at all times and are the responsibility of the passenger.

<http://www.iata.org/whatwedo/passenger/baggage/Pages/check-bag.aspx>



Cabin Crew should be encouraged to be vigilant during the boarding phase to ensure that all carry-on baggage conforms to the airlines regulations on size/weight etc. and that carry-on baggage is properly tagged. Ground staff should also monitor cabin baggage during the check in and boarding process and not allow deviations from these standards.

For more information IATA RP1749 Carriage of Carry-On Baggage can be referenced in the IATA Passenger Services Conference Resolutions Manual.

Identification of carry-on baggage

In order to provide a means of demonstrating that a piece of carry-on baggage has been submitted to the carrier at the check-in or boarding point and detecting carry-on baggage which has not been so submitted, a carry-on baggage tag/label may be affixed to each piece of baggage accepted for carriage in the cabin.

Excessive carry-on baggage

After check-in, excessive carry-on baggage (including items purchased on departure) should be handled and labeled as checked baggage or stowed in the cargo as per valet/sky check procedures on smaller aircraft. Please see *Section 3.39 Lithium Battery Event Prevention* for additional guidance to consider prior to checking excessive carry-on baggage to the cargo hold.

Informing passengers about carry-on baggage

Because carry-on baggage allowances vary from carrier to carrier, it is very important that passengers are made aware of the allowances applicable to their journey. Such action will improve customer service and on-time reliability. It is recommended that Airlines who belong to the same alliance or working with code-sharing partners, agree on the same consistent guidelines. Similarly, consideration needs to be given when passengers are connecting on to a smaller aircraft type.

Carry-on baggage awareness

Cabin Crew must be trained in the identification and handling of dangerous goods as applicable to their role.

Carry-on baggage and communication to passengers

When explaining limitations on Carry-on baggage, Cabin Crew can explain that limited carry-on baggage provides the following benefits:

- Of increased importance in the event of an emergency evacuation
- To avoid injuries from Carry-on baggage or other items falling out of the overhead compartments.
- Increased leg space and improved stowage space



- Fairness — space for all passengers regardless of boarding sequence;
- Ease of movement into and out of the seats;
- Ease of boarding and deplaning;
- Comfort during transfer time;
- Health (reduces risk of fatigue and injuries such as back injuries);
- Speed of boarding, disembarking and transfer leads to improve on-time performance

Announcement during boarding

Some airlines have adopted an announcement during the boarding of passengers to solicit timely compliance and cooperation. Such an announcement could include:

“May we draw your attention to the following information: There are two designated stowage areas for your hand baggage: The overhead bin and the floor space in front of you. Please use both areas, placing softer lightweight items carefully in the overhead bins and heavier more solid items underneath the seat in front of you. To facilitate an on-time departure, please do not block the aisle while stowing your hand baggage.

For those passengers seated in the exit rows or in the first rows of the cabin, all items of hand baggage must be placed carefully in the overhead bins. Exit areas, aisles and the floor space around your feet must be kept clear of baggage for takeoff and landing.”

2.86 OVERSIZED, FRAGILE ITEMS AND SPECIAL ARTICLES

It is recommended that oversized, fragile items and special articles (e.g. Musical instruments, glass pictures, etc.) should be carried in an overhead bin, or closed compartment installed on the aircraft. If this is not possible, then special objects, such as large musical instruments, may be carried subject to:

- Being properly secured by a safety belt and other approved/accepted means to eliminate the possibility of shifting under all normally anticipated flight and ground conditions; and
- Being packaged or covered with approved materials to avoid possible injury to passengers; and
- Not imposing any load on seats or on the floor structure that exceeds the load limitation for those components; and
- Not being located in a position that restricts the access to or use of any emergency equipment, exit, or the use of the aisle; and
- Not obstructing any sign, placard or screen where safety information is demonstrated to passengers.



2.87 PETS AND ANIMALS IN THE PASSENGER CABIN

Some airlines will not accept animals for carriage in passenger cabin. Other carriers may carry animals in passenger cabins under special conditions as accompanied baggage in accordance with their own company policy and government regulations.

Where passengers travel with their pets, such as domestic dogs, cats, ferrets, rabbits and birds, as accompanied baggage in the cabin the animal must travel in a suitable container according to IATA's Live Animal Regulations, i.e. the animal can stand in a natural position, turn around and lie down.

Containers should not exceed the dimensions for carry-on baggage and should be able to be stowed under the seat for taxi, takeoff and landing. The container must be well ventilated, securely fastened and made of material that is leak-proof and cannot be easily destroyed by the animal inside it. Animals should not be taken out of the container at any time during the flight.

Health and Hygiene

Cabin Crew should avoid any physical contact with the animal and observe strict personal hygiene rules at all times. All animals including domestic pets are capable of transmitting a variety of diseases to humans, so they must not be stowed in close proximity to foodstuffs during any stage of the flight because of the risks of contamination. In the event that the Cabin Crew is required to handle animals during the flight they should:

- Wear protective gloves while handling the animal
- Wash hands after handling the animal
- Report to a doctor as soon as possible after being bitten or scratched by an animal, providing information on the species and origin of the animal. If delay is inevitable before obtaining medical attention, ensure that the wound is thoroughly washed with soap and water and covered with a dry dressing until medical attention can be obtained.
- Avoid contaminating skin or clothing with blood or excretion of animals. Contaminated clothing must be changed and sent for cleaning. Skin contamination must be cleansed using a germicidal soap.

2.88 TAKEOFF, APPROACH AND LANDING SIGNALS

Cabin Crew should be aware of the procedures, including either signals or verbal commands, that notify them when to:

- Prepare for takeoff
- Prepare for descent phase



- Prepare for landing

Some Airlines practice a procedure of communication via the ordinance sign chimes for the Flight Crew to advise the Cabin Crew as others use verbal commands such as: “Would the Cabin Crew please be seated for Takeoff/prepare for descent/be seated for landing”. Cabin readiness prior to landing is to be communicated and coordinated between the Flight Crew and Cabin Crew as applicable to the operator’s procedures and these procedures might be verbal or non-verbal.

2.89 SILENT REVIEW

The objective of the Silent Review is to mentally prepare Cabin Crew for any eventualities that may occur during takeoff and landing so that they are prepared for the unexpected taking into account both inside and outside conditions.

The use of the “Silent Review” is an excellent tool to prepare for the unexpected emergency situations. The “Silent Review” helps the Cabin Crew to focus their attention on safety: Crew members will also be ready to act, in the event of an unexpected emergency. It enables Cabin Crew to respond, adapt and react quickly and correctly in the event of an emergency. “Silent Review” can take any form, and there are no hard and fast rules. It should contain all the elements needed to “Review” evacuation duties and responsibilities

Suggested reflections for the “Silent Review” should include, but is not limited to the following:

- Which aircraft type am I on?
- Takeoff and landing over land/water
- Which type of exit am I operating?
- Am I properly secured in my seat?
- Which commands do I expect?
- Check outside conditions
- How do I initiate an evacuation?
- Location of door assist handles
- How do I open the exit?
- Where is the manual inflation handle?
- What are my evacuation commands?
- When, where and how do I re-direct passengers?
- What equipment do I take with me?
- What are my duties on the ground?
- Brace position and commands
- Location of Able Bodied Passengers (ABP’s)
- Location of Passengers needing special assistance



It is recommended that “Silent Review” be included in all Safety training courses: Initial and Recurrent training.

Below is an example of a “Silent Review” used by some operators, to help review some critical components, this example is known as **OLDABC**:

- **OPERATION OF EXITS**
- **LOCATION OF EMERGENCY EQUIPMENT**
- **DRILLS (Brace for impact)**
- **ABLE-BODIED PASSENGERS AND DISABLED PASSENGERS**
- **BRACE POSITION**
- **COMMANDS**

Another example of a “Silent Review” is **ALERT**.

- **A - Aircraft type**
- **L- Location**
- **E - Equipment**
- **R- Responsibility**
- **T- Threat**

Regardless of the format used for the Silent Review, these help Cabin Crew to reflect on how to complete their emergency duties and in the correct sequence as applicable to the situation. It is easy to get caught up in the everyday on board tasks, and all the different duties required of Cabin Crew, such as boarding, catering issues, passenger queries, delays, and it is easy to get distracted. When Cabin Crew take their positions for takeoff or landing, the use of the “Silent Review” will help to focus on the emergency responsibilities, in the event of an unplanned emergency. The ability to anticipate a situation before it happens will enable Cabin Crew to respond rapidly. The Cabin Crew should be alert to any indication that a possible emergency situation exists, when preparing for takeoff and landing. Such indications may be fire, smoke, scraping metal, unusual noises, the force of impact, or an unusual aircraft attitude.

2.90 STERILE FLIGHT DECK

A sterile flight deck procedure is to ensure the safe operation of the aircraft and allow Flight Crew to concentrate on their tasks/duties. Cabin Crew must not enter the flight deck or call/talk to Flight Crew during critical phases of flight, except for safety issues or in the event of an emergency.

The phases of flight when the operational state of the flight deck must be sterile would be defined by the State of the operator. Procedures that define a sterile flight deck during critical phases of flight usually include a procedure for communication between the Cabin Crew and Flight Crew and a



procedure for notification of the Flight Crew in the event of an emergency. Critical phases of flight are usually considered:

- Taxi
- Takeoff
- Initial climb (approx. 10 minutes after takeoff)
- Approach (approx. 10 minutes prior to landing)
- Any other phases of flight below 10,000 feet
- Landing



2.91 SAMPLE CABIN CREW STERILE FLIGHT DECK PROCEDURES

***Unless the safety of the aircraft is immediately affected**

Flight Phase	From	To	Restriction
Pushback	Doors armed by Cabin Crew	Aircraft starts to taxi	Cabin Crew must not contact Flight Crew*
Taxi	Aircraft starts to taxi	Engine power applied for takeoff	Communication through the SCCM only
Takeoff	Engine power applied for takeoff	Aircraft is airborne, normally retraction of undercarriage.	Cabin Crew must not contact Flight Crew*
Climb	Retraction of undercarriage	Seatbelt sign OFF * In case of turbulence where the seatbelt sign must stay on longer after initial climb, a Flight deck signal would be suggested (announcement, call or chime).	Communication through the SCCM only
Cruise			NO RESTRICTIONS
Descent			Communication through the SCCM only
Landing	SCCM instruction to be seated or Flight deck advisory (announcement, call or chime)		Cabin Crew must not contact Flight Crew*
Taxi	Aircraft has vacated the runway	Aircraft parked on stand	Communication through the SCCM only
EXCEPTIONS – all	Safety issues or in the	Safety issues or in the	NO RESTRICTIONS



phases	event of an emergency	event of an emergency	
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2.92 ENTERING AND EXITING THE FLIGHT DECK

No person should be admitted to the flight deck of an aircraft unless the person is an operating Crew member or otherwise authorized with the permission of the Pilot-in-Command. The Pilot-in-Command may decide to exclude any person from the flight deck in the interests of safety. Airlines must establish a clear policy regarding when the flight deck door and access to the flight deck.

It is recommended that airlines safety procedures and training should encourage Cabin Crew to monitor the lavatory, galley locations and the area around the flight deck door to prevent passengers from congregating in these areas.

Airlines should establish a policy that ensures the area around the flight deck door is kept clear when a pilot leaves the flight deck and monitor the area until the pilot returns to the flight deck. Policies and/or procedures related to flight deck security are considered sensitive information and are normally provided to relevant personnel in a manner that protects the content from unnecessary disclosure.

2.93 SERVICE TO THE FLIGHT DECK

Airlines should establish a clear policy for serving meals and beverages to the Flight Crew in accordance with aviation regulations, where applicable. To prevent the remote possibility of both pilots being incapacitated at the same time, it is recommended that the Pilot-in-Command and other Flight Crew do not eat the same meal and avoid certain types of foods which are particularly liable to cause gastro-intestinal symptoms (e.g. shellfish, crustaceans, etc.)

Beverages should be served separately from the meal tray in order to avoid spillage. No alcoholic beverages should be served to anyone on the flight deck at any time. The following are guidelines to be considered for offering service to the flight deck. When a Crew meal is supplied:

- Meal trays/casseroles should be kept in their assigned location in the relevant galley until the food is required for consumption
- The Pilot-in-Command and the First Officer should not have the same meal and not at the same time
- Drinks and meal trays should be handed directly to the pilots and not left unattended in the flight deck
- Drinks should not be passed over the central pedestal area to avoid spillage and consequential damage to electronics. Serve drinks via window side, to the Pilot-in-Command from left side and First Officer from the right side



- Alcoholic beverages must not be served or consumed in the flight deck
- All beverages should be served $\frac{2}{3}$ of the cup to avoid spillage. Some airlines have coffee cups with lids on them to avoid spillage
- All catering items should be removed from the flight deck before takeoff and landing and cleared during the flight as necessary

2.94 CABIN SERVICE ON THE GROUND IN THE EVENT OF A DELAY

In the event of a flight delay, airlines should ensure that they have procedures in place regarding the type of cabin service to be performed on the ground in accordance with the length of the delay. It is recommended that any cabin service be conducted under the following conditions:

- The aircraft must be parked and engines switched off (with or without bridge or stairs in place)
- Cabin Crew must be fully briefed by the Pilot-in-Command or his delegate with respect to the expected length of the delay
- All doors/exits must be clear of any obstructions at all times. Chair, tables at window exits should not be used, displace the passenger for the service if required
- Cabin Crew must be prepared for the possibility of an emergency evacuation

Airlines should have in place procedures to determine the levels of service dependent on the length of the delay and it is recommended that a hand service be conducted only; carts and trolleys should not block the aisles, and:

- All galley and service equipment should be stowed immediately after use
- The PIC should advise the Cabin Crew at least 10 minutes prior to commencement of taxi
- The cabin must be clear of all service items (meal trays, glasses, etc.) prior to any aircraft movement
- The SCCM will advise the PIC immediately after the service is completed and the cabin is secure for pushback or taxi
- Videos can be shown during extensive ground delays but the aircraft must be parked and engines switched off (with or without bridge or stairs in place) and the video presentation or individual video system activation would be coordinated with the PIC
- Some Airlines have procedures for approved gate to gate IFE and these procedures would allow for uninterrupted viewing as per the operator's procedures



2.95 COMMENCEMENT OF SERVICE DURING CRUISE

The airline will determine at what point after take-off services may commence, taking into account the nature of the operation and the angle of the aircraft cabin (cabin floor) so as not to pose unnecessary hazard to Cabin Crews:

- Carts and trolleys must be equipped with braking devices and must not be left unattended when not in galley stowage. However, Cabin Crew working in the cabin during meal service may leave a cart unattended, but secured, to fetch items in the galley, and Cabin Crew working in the galley may leave a cart unattended, but secured, in the galley area to supply carts in the cabin
- Stow away loose items into proper carts/units, stow and latch each individual cart/unit if not needed to perform service
- Take care to close doors and lockers and secure them not only for takeoff and landing but also when not in use during flight

2.96 CABIN, GALLEY AND LAVATORY CHECKS

The aircraft cabin(s) and lavatories must be periodically monitored for early detection of potential safety, security and health related incidents. Cabin Crew should monitor cabins and lavatories as per applicable Airline recommended procedures (e.g. intervals no less than 15 minutes). Special attention should be drawn to lavatories, which should be checked for any trace of passenger smoking or tampering with the smoke detector. Cabin Crew should alternate breaks as required so that Cabin Crew are regularly visible in the cabin. Galley fire prevention can be maintained by keeping work areas clean and free from debris such as paper products, and by using equipment for their intended purposes.

2.97 FLIGHT DECK CHECKS

For reasons of safety, Cabin Crew should check on a regular basis with the Flight Crew.

2.98 POURING LIQUIDS IN AIRCRAFT SINKS

Cabin Crew should refrain from pouring liquids into galley and lavatory sinks on the ground as this may result to injuries to ground staff.



2.99 LIQUID SPILLAGE FROM GALLEY RUBBISH BINS AND DRAINS

Galley drains can be blocked by coffee grounds causing overflow to spill onto the galley floor or waste liquids leaking from split galley rubbish bins can also end up on the galley floor.

Galley sink waste is usually drained overboard through heated waste masts. To prevent sink drain blockages it is recommended not to put solid waste (coffee grounds, tea bags, fruit pulp, and so on) in the sink drain. Place solid waste in galley waste bins. Mixtures, which can curdle and create a drain blockage, should be diluted with an equal amount of water.

2.100 CLEAN GALLEY CONCEPT

To avoid incidents resulting from waste disposal on board, always wipe all spills to avoid the possibilities of slips and falls or electric shock.

2.101 CIRCUIT BREAKERS

A circuit breaker that has tripped will usually have a white rim showing at its base and usually tripped as a result of an abnormality in the wiring. In the event a circuit breaker has tripped, it is important to request permission of the Flight Crew before resetting a circuit breaker. The following is a sample of an Airline procedure:

- Always advise the PIC
- If instructed by the PIC to reset a circuit breaker
- Confirm circuit breaker is fully out
- If the affected circuit breaker has an ON/OFF switch (e.g. coffee maker, oven etc.) place switch on appliance to OFF
- Reset circuit breaker by pushing it back in
- If applicable, place ON/OFF switch to ON

IMPORTANT: Should the circuit breaker trip again, DO NOT ATTEMPT a second reset as a second reset could result in an electrical fire. Advise the PIC that the circuit breaker tripped a second time.



2.102 SERVING ALCOHOL

Offering superior customer service and ensuring passenger satisfaction are common goals of airlines. Serving alcoholic beverages to passengers is a practice that has occurred for many years and will likely continue well into the future. However, there is a distinction between consuming alcohol for pleasure and becoming intoxicated as a result of consuming alcohol. An intoxicated passenger can become a danger to themselves and others on board the aircraft. In the event of an abnormal or emergency situation, the intoxicated passenger would likely be less able to comprehend, cooperate, respond, follow instructions or evacuate the aircraft.

Tolerating intoxicated passenger behavior at or in the check-in counter, terminal building, lounges, the gate and on board the aircraft can undermine the airline's goal to offer safe, secure and superior passenger service to all passengers on board, as well as the goal of a safe work environment for Crew members.

Airlines should not permit a passenger to board an aircraft where there are reasonable grounds to believe that his/her faculties are impaired by alcohol to an extent that will present a hazard to the aircraft, to persons on board (Crew or passengers) or to the passenger him/herself.

Service of such beverages should be carried out in a reasonable manner. This could include tactfully refusing to serve a passenger alcoholic beverages. Passengers should not be permitted to drink alcohol unless served by the Cabin Crew and it is important that the Cabin Crew be attentive to identifying passengers that might be consuming their own alcohol. On specific routes with increased statistics of unruly passenger incidents, some airlines implement alcohol sales rather than free service as an attempt to mitigate these incidents.

The company may consider having a written policy that supports all employees in the enforcement of their specific Alcohol Policy. Some IATA Member airlines require Cabin Crew to attain Responsible Service of Alcohol (RSA) statements upon hiring (Australia). Other IATA Member airlines simply use the National Restaurants Association (USA) Traffic light system to recognize and manage possible intoxication. These are classified as green, yellow, and red behaviors:



Green Behaviors	Yellow Behaviors	Red Behaviors
<p>Sociable</p> <p>Relaxed</p> <p>Comfortable</p> <p>Happy</p>	<p>Reduced inhibitions</p> <p>Impaired judgment</p> <p>Talking or laughing louder than normal</p> <p>Being overly friendly</p> <p>Arguing or baiting</p> <p>Increased use of foul language</p> <p>Increasing alcohol consumption</p> <p>Careless with money</p>	<p>Moving in slow motion</p> <p>Needing time to respond to questions</p> <p>Glassy-eyed</p> <p>Losing train of thought</p> <p>Making irrational statements</p> <p>Spilling drinks</p> <p>Walking awkwardly</p> <p>Stumbling or falling down</p> <p>Unable to sit up straight</p>

Notwithstanding the above behavior indicators, it is important to distinguish behavior that may simply be a person’s personality trait (e.g. talking or laughing louder) from behavior that might be a result of cultural background rather than unruly behavior. It is recommended that the company adopt a method for handling disruptive and unruly passengers in a manner that is sensitive to issues of culture and custom.

A concerned, upset or rude customer is best handled using conflict management techniques to defuse and to avoid escalation of the situation.

Traffic light procedures

The Traffic Light Procedures encourage the serving of passengers responsibly by observing their behaviors. It is recommended to offer food in order to slow a passenger’s transition from Green to Yellow behaviors.



Green Behaviors	If a passenger displays Yellow behaviors, it is recommended to:	If a passenger displays red behaviors, it is recommended to:
	<p>Notify the SCC/Purser and the Flight Crew</p> <p>Not allow the passenger to transition to Red behaviors</p> <p>Delay requests for alcohol by offering food and water with drinks</p> <p>As applicable to the situation, stop serving alcohol to the passenger</p>	<p>Notify the SCC/Purser and Flight Crew that a passenger appears to be intoxicated</p> <p>Stop serving alcohol to the passenger</p> <p>Advise all Cabin Crew not to serve alcohol to the passenger</p> <p>Inform passenger that the Crew will not be serving further alcohol</p> <p>Consider medical attention. Certain medical conditions may cause similar symptoms to those caused by intoxication</p> <p>Consider declaring an appropriate threat level (as required)</p> <p>Complete and submit required reports</p>

When dealing with a passenger who appears to be intoxicated, it is recommended to be tactful and as discreet as possible. It is important to notify the SCCM/ Purser and Flight Crew if a passenger appears to be intoxicated or drinks from their own supply of alcohol. If the passenger refuses to comply with Crew member requests, the Cabin Crew should follow their company procedures.



2.103 TURBULENCE

Turbulence is leading cause of injury in non-fatal accidents. Over 25% of serious injuries result in diversions. Unrestrained equipment can damage cabin interior and may seriously injure passengers and Crew. Turbulence events attract media attention and may result in negative impact on public view of the airlines safety record.

Cabin Crew are injured due to turbulence at a disproportionate rate compared to passengers. Cabin Crew injuries occur at a higher rate as their duties require them to be standing and moving about in the passenger cabin and/or galleys, unseated and therefore not always secure with their seatbelt during flight. Cruise is the predominant phase associated with turbulence-related injuries. However, Cabin Crew also sustain physical harm during climb, descent and approach.

Investing in turbulence management strategies can result in less incidents or accidents which in turn could also result in significant savings for airlines. The commercial air transport industry has a vested interest in More Safety; Less Cost. The Promotion of “Seatbelt Use at ALL Times While Seated” policy is an important and effective global safety initiative to mitigate turbulence incidents and/or accidents and resulting injuries. IATA promotes such policy amongst its member airlines. For more information please consult the IATA Turbulence Management guidelines which can be found at: www.iata.org/cabin-safety

2.104 DANGEROUS GOODS

Dangerous goods are substances or articles which are capable of posing a risk to health, safety, property or the environment.

Cabin Crew are required to recognize the hazards that each class of dangerous goods represents. In case of any concerns the Cabin Crew should always advise the PIC.

IATA offers a Dangerous Goods Training Program – Workbook 3 for Cabin Crew: <http://www.iata.org/publications/dgr/Pages/training-books.aspx>

IATA's training programs are designed to be used in conjunction with the Dangerous Goods Regulations to familiarize students with the various sections of the DGR manual and how and when to apply them. The IATA training workbooks are based on practical application of the IATA Dangerous Goods Regulations, which includes all ICAO requirements.

After the study and use of the IATA Workbook 3 for Cabin Crew, the learner will be able to:

- Recognize dangerous goods;
- Have knowledge of the origin of the current regulations and be aware of the general philosophy;



- Recognize the hazard/handling of labels applicable to dangerous goods;
- Recognize dangerous goods packaging;
- Be able to identify potential hidden hazards in baggage and cargo
- Be aware of the provisions for dangerous goods in baggage of passengers and Crew;
- Be familiar with dangerous goods emergency response procedures for handling events



3 SECTION – EMERGENCY PROCEDURES

3.1 MANAGEMENT OF EMERGENCIES

Each emergency situation is different. It is simply impossible to train for an infinite number of possible abnormal or emergency scenarios or situations because we simply do not know what could possibly happen. We cannot train for it all, but we can prepare for it. By managing emergencies Cabin Crew contribute to minimizing damage to property, injuries or fatalities through appropriate actions. These are influenced by their knowledge of their Airline’s respective safety and emergency procedures, their initiative, situational awareness, good judgment, communication, cooperation and coordination and training.

3.2 LEVELS OF STRESS

People react differently to stressful situations such as an emergency situation on board an aircraft. High levels of fear or stress can lead to the following negative behaviors in both passengers and Crew: panic, freezing or dependency. It is important for Cabin Crew to recognize these and to use countermeasures to interrupt and change these behaviors.

3.3 LANDING CATEGORIES

There are three landing categories: normal landing, abnormal landing (involving a condition that requires a higher alert level e.g. an engine out) and emergency landing (serious situation requiring Crew members to follow emergency procedures).

3.4 URGENT COMMUNICATION

Airlines should establish urgent communications to and from the flight deck. Example, when immediate communication is required from the flight deck to the cabin: “Would the SCCM call the flight deck.” The SCCM would immediately call the flight deck using the interphone. This call would also indicate to the remainder of the Cabin Crew to be on alert for further instruction from the SCCM. And vice-versa Cabin Crew to Flight Deck: Cabin Crew to use interphone and dial the emergency call as per each aircraft type.



3.5 CREW MEMBER INCAPACITATION

Crew member incapacitation is defined as inability of a Crew member to carry out his/her normal and emergency duties. Incapacitation may occur as a result of injury or health.

Flight Crew incapacitation

In case of incapacitation of a Flight Crew member, the remaining Crew member shall as soon as practicable call a member of Cabin Crew by using the simplest and most effective way of communication to summon help.

The SCCM(SCCM) or any other Crew member must proceed to the Flight Deck immediately. Should a locked door policy exist, ensure that those procedures are followed before entering the Flight Deck. The Cabin Crew/s should carry out the following action:

- Tighten and manually lock the shoulder harness of the incapacitated Crew member
- Slide the seat fully aft
- Recline the seat back
- Liaise with the other Crew member on further action and consider;
- First Aid
- Call for medical assistance
- Remove the incapacitate Crew member from the Flight Deck (if required or advised to do so)
- Consider the implications of removal of the incapacitated Crew member e.g.
- Injury to the incapacitated Crew member
- Damage/interference to Flight Deck controls

If the decision is made to leave the incapacitated Flight Crew in the flight deck a member of Cabin Crew must stay with him or her until the aircraft has landed safely. Consideration could be given to seek the assistance of a type qualified company pilot on board to replace the incapacitated Flight Crew.

Incapacitated SCCM or Cabin Crew

Airlines should establish procedures to select the next most suitably qualified (senior ranking) Cabin Crew to operate as SCCM in the event of the nominated SCCM becoming unable to operate or in the event that a Cabin Crew became incapacitated. Such procedures must be acceptable to the Authority and take into account the Cabin Crew's operational experience.



3.6 UNPLANNED EMERGENCIES

Unplanned emergencies occur with no warning and give the Crew little or no time to prepare or plan any course of action. Most occur during takeoff or landing. The most important mitigation tool is the silent review.

3.7 PLANNED EMERGENCIES

Cabin Crew receive advance warning and adequate time to prepare any course of action. A tool Cabin Crew can use to prepare passengers for a prepared emergency landing is a Prepared Emergency Landing Card.

3.8 PRESSURIZATION PROBLEMS

Cabin pressurization is the active pumping of air into an aircraft cabin to increase the air pressure within the cabin. It is required when an aircraft reaches high altitudes to allow people to absorb sufficient oxygen

If an aircraft experiences a pressurization failure, passenger oxygen masks are automatically deployed if the cabin altitude exceeds 14,000 feet.

3.9 DECOMPRESSION

Should the pressurization system fail for any reason, or should there be a failure of the aircraft, this would cause:

- Decrease of cabin pressure
- Increase in cabin altitude to the altitude the aircraft is actually flying

This is known as a decompression. A decompression may be slow or rapid/explosive depending on the cause. Hypoxia is the main hazard facing Flight Crew, Cabin Crew and Passengers.

Hypoxia

Oxygen is essential for life, being required by every tissue and cell of the human body to carry out its functions.



The following effects may develop with exposure to high altitude:

- 10,000 feet to 20,000 feet: Mental impairment, Euphoria causing a lack of awareness of danger and the ability to remedy the situation
- 20,000 feet to 30,000 feet: lack of muscular co-ordination and collapse
- 30,000 feet to 40,000 feet: unconsciousness and death

The symptoms of hypoxia are various, and may manifest themselves differently in each individual.

Initial signs of hypoxia include:

- Increased rate of breathing
- Headache
- Nausea
- Light-headedness
- Dizziness
- Tingling sensation in hands and feet
- Sweating
- Irritability
- Euphoria
- Cyanosis (bluing of the lips and the fingernails)
- Ear discomfort
- Stomach pain due to gas expansion

The symptoms become more pronounced with the lack of oxygen, and include:

- Impaired vision
- Impaired judgment
- Motor control (unable to coordinate)
- Drowsiness
- Slurred Speech
- Memory loss
- Difficulty to concentrate

Hypoxia can cause a false sense of well-being. It is possible for a person to be hypoxic and not be aware of their condition. It is important that all Crew members recognize the signs of hypoxia, and administer supplemental oxygen as soon as possible in order to prevent unconsciousness. When oxygen has been administered recovery will usually be within minutes. However, the person may not be aware of having a period of reduced consciousness.

When a rapid decompression occurs, the immediate use of oxygen is critical. The first action of the Cabin Crew should be to:

- Don the nearest oxygen mask



- Sit down and strap in, or grasp the nearest fixed object to avoid being ejected from the aircraft

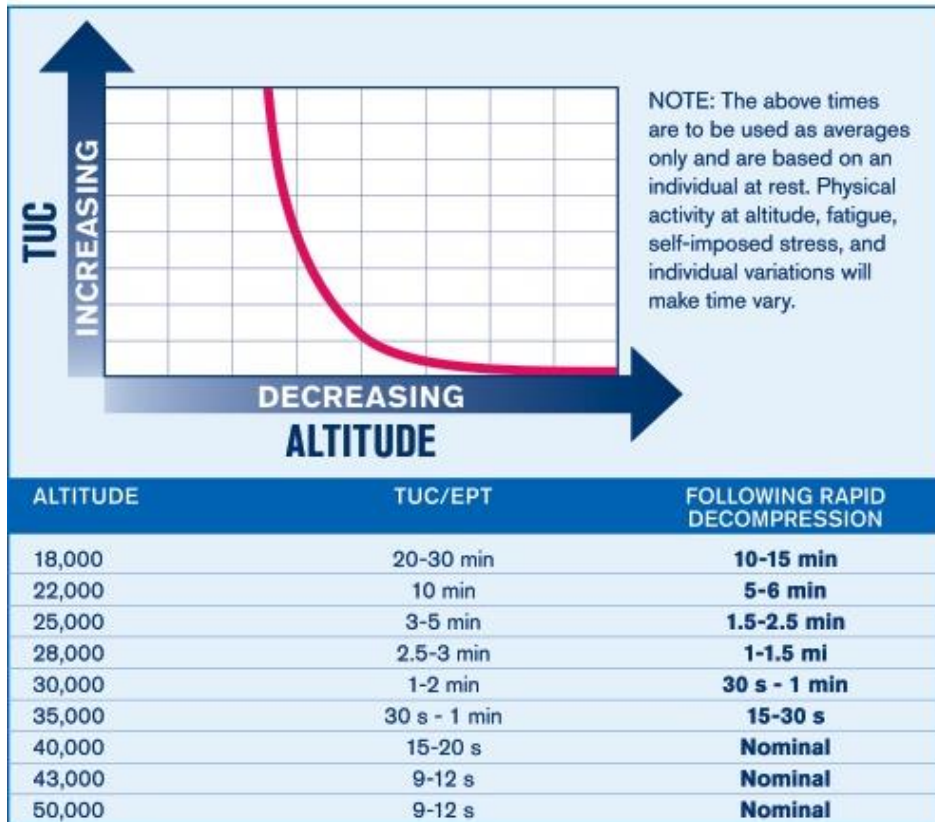
If Cabin Crew are unable to sit down or grasp a fixed object, ask passengers to assist by holding on.

3.10 TIME OF USEFUL CONSCIOUSNESS

Time of Useful Consciousness (TUC) or Effective Performance Time (EPT) is the period of time from interruption of the oxygen supply, or exposure to an oxygen-poor environment, to the time when an individual is no longer capable of taking proper corrective and protective action. The faster the rate of ascent, the worse the impairment and the faster it happens. TUC also decreases with increasing altitude.

Times of Useful Consciousness versus Altitude, shows the trend of TUC as a function of altitude. However, slow decompression is as dangerous as or more dangerous than a rapid decompression. By its nature, a rapid decompression commands attention. In contrast, a slow decompression may go unnoticed and the resultant hypoxia may be unrecognized by the Crew member.

WARNING: The TUC does not mean the onset of unconsciousness. Impaired performance may be immediate. Prompt use of 100 percent oxygen is critical.



Reference FAA Advisory Circular AC61-107B Subject: Aircraft Operations at Altitudes above 25,000 Feet Mean Sea Level or Mach Numbers Greater Than .75

The FAA Aerospace Medical Research Division of the Civil Aerospace Medical Institute (CAMI) offers Cabin Safety Workshops that include physiology education including classroom instruction of the effects of high altitude flight operations on the human body and concludes with an altitude chamber flight to allow the participants to actually experience the effects of decompression. The workshop includes numerous other Cabin Safety related topics. These workshops are not intended as basic training for Cabin Crew but are designed to provide supplemental information.

http://www.faa.gov/data_research/research/med_humanfacs/aeromedical/cabinsafety/workshops

3.11 GUIDANCE FOR DECOMPRESSION PROCEDURE

A review of pressurization incidents and accidents clearly indicated that aircraft pressurization events had a continuing presence in aviation operations. Many of the events were identical to events that had occurred in the past, a few of which escalated into fatal accidents. The events examined



occurred around the world and on a variety of different pressurized aircraft. Multiple issues arose from the review:

- Cabin altitude warning horn not recognized by the Flight Crew and consequences of its failures
- Master Caution and passenger oxygen masks deployment indication not recognized by the Flight Crew
- Cabin Crew not advising the Flight Crew of passenger oxygen masks deployment
- Cabin Crew not establishing and maintaining open communication between the cabin and the flight deck
- Physiological effects of rising cabin altitude not recognized by the Flight Crew
- Flight Crews' understanding for and appreciation of gradual cabin depressurization, the insidious effects of hypoxia, and the importance of using supplemental oxygen as a precaution

Safety recommendations: Several international accident investigation reports were addressed towards National Authorities recommending the need for communication between Cabin Crew and Flight Crew in case of suspected decrease of cabin pressure.

Safety actions recommended to EASA: All airlines to amend Cabin Crew procedures as follows - When the oxygen masks deploy in the cabin due to loss of cabin pressure or insufficient cabin pressure and if the aircraft does not suspend climb, or level-off or start a descent, the Cabin Crew in charge or the Cabin Crew situated closest to the flight deck be required to immediately notify the Flight Crew of the oxygen masks deployment and to confirm that the Flight Crew have donned their oxygen masks.

Guidance for Decompression Procedure





3.12 BRACING FOR LANDING

The BRACE for landing usually is given by the Flight Crew. Upon hearing the command to BRACE, the Cabin Crew should take their brace position and instruct passengers to do so as well using shouted oral commands.

However, there may be a time when the Cabin Crew suspects an oncoming impact (hearing metal scrapes, unusual aircraft attitude, fire, etc.) and in this situation the Cabin Crew should BRACE and initiate the advisory to passengers using shouted oral commands.

3.13 COMMANDS

Commands are a very important part of the evacuation process, and should be:

- Situation relevant
- Loud
- Clear
- Short
- Well-paced
- Assertive
- Positive (Release your seatbelt versus Unfasten your seatbelt)

3.14 RAPID DEPLANING

There may be a situation when an evacuation is not required but when passengers and Crew should be deplaned immediately and quickly (e.g. a serious situations such a fuelling emergencies). In this instance rapid deplaning would be appropriate. A rapid deplaning may be initiated by pilots or in their absence; the Senior Cabin Crew. The following is sample SOP:

Two prong PA

1. First PA to alert Cabin Crew (Cabin Crew should return to their doors - where time permits)
2. Second PA to initiate rapid deplaning

Actions

- Ensure bridge or stairs are in place.



- Direct passengers to go the designated exit(s) and to leave their baggage behind: ***“Leave the aircraft immediately*** (specify from which door(s) ***and please leave all of your personal belongings behind”***
- Cabin Crew closest to the entry door(s) or a designated ABP will lead passengers into the terminal.
- Cabin Crew must remain alert in case an evacuation is required
- Rapid deplaning is complete when the last passenger or Crew member leaves the aircraft.
- If no bridge or stairs are in place an evacuation may need to be initiated.

3.15 EVACUATIONS

Cabin Crew must react quickly and according to the situation. No two emergency evacuations are the exact same as there are numerous factors that will affect the situation. Some factors the Crew may experience during an evacuation are: Fire, smoke, ditching/water, slide/slide-raft malfunction, unusual aircraft attitude, landing gear collapse, severe structural damage, no communication from Flight Crew, etc.

The necessity to initiate and carry out an evacuation from the aircraft can arise from two possible circumstances:

Unplanned – an incident or emergency developing without warning;

Planned – where time and knowledge allow preparations to be carried out while airborne in the event an evacuation becomes necessary after landing.

Evacuations are more expeditious than a rapid deplaning. Evacuations are initiated by the Pilot-in-Command or by the Cabin Crew in life threatening situations or a catastrophic accident such as the break-up of the fuselage, fire etc.) Before initiating an evacuation the Cabin Crew must advise the PIC (if possible), ensure the aircraft is not moving and that the engines are OFF (particularly when using exits near engines).

3.16 UNPLANNED EMERGENCY EVACUATION

Many evacuations are not planned, and occur with no prior warning on take-off or landing. As mentioned, in most cases the decision to evacuate is made by the Flight Crew. In a study conducted by the VERRES (VLTA Emergency Requirements Research Evacuation Study, Task1.2), 77 accidents were analyzed. The results of the analysis show that in 11 of the 77 cases (14%) “Cabin Crew had a significant role in the evacuation decision since they often ask the pilot to decide an evacuation”.



There may be occasions when the Cabin Crew has to initiate the evacuation, if there is a life-threatening situation in the cabin, such as:

- Uncontrollable fire
- Dense smoke
- Severe or structural damage
- Ditching

When making the decision to initiate an evacuation, Cabin Crew must evaluate the level of danger, and the consequences that a delay in decision-making may lead to. Smoke or fire that is out of control would definitely require a rapid decision because of the danger it presents to the occupants of the aircraft,

If Cabin Crew considers that an evacuation may be required, they must attempt to contact the Flight Crew in order to inform them of the situation, and then await instructions. If contact with the Flight Crew is not possible, Cabin Crew should initiate the evacuation.

However, any evacuation requires Crew co-ordination, because not all Crew members may be aware that a life-threatening situation exists. Therefore, all Crew members need to be informed. There are many possible methods, depending on their availability:

- Public Address
- Interphone
- Interphone
- Megaphone
- Evacuation alarm

3.17 PLANNED EMERGENCY EVACUATION

Inflight emergencies may result in the diversion of the aircraft and a planned emergency evacuation. Cabin Crew will have some time to prepare the cabin and passengers for eventual evacuation after landing.

Briefing of Cabin Crew

The SCCM provides the Cabin Crew with the information received from the Flight Crew. The SCCM instructs Cabin Crew to take their position, and prepare for the emergency announcement and demonstration.



Preparing the cabin

The difference with a planned emergency evacuation is that there is time to prepare the cabin and the passengers. It is best when the Flight Crew inform the passengers of an emergency, however, this may not always be possible, due to the workload of the Flight Crew during an emergency. Therefore, the SCCM may be required to make the initial announcement. The SCCM would explain:

- The nature of the emergency
- Necessity to prepare the cabin
- Passengers must follow the instructions of the Cabin Crew

Time permitting, a full passenger briefing may be possible: The cabin dividers should be open, the lighting should be “Bright”, and the entertainment system, if applicable internet and/or telecommunications systems switched off. Passengers must be in their seats, with the seatbacks in the upright position, and with seatbelts fastened. The Cabin Crew should be prepared to demonstrate the “Emergency Briefing”, in their assigned briefing position.

Emergency Passenger Briefing

The aim of the briefing is to give passengers as much information as possible. The amount of time available will determine the extent of the briefing. Both passengers and Crew members will need to give their undivided attention to the announcements. Therefore, there should be no elements of unnecessary distraction. This is the only opportunity that Crew members will get to relay this information. To avoid distraction Crew members should:

- Stay in the assigned demo position
- Do not walk up and down the aisle during the announcement
- Do not talk during the announcements
- Coordinate the demonstration with the announcement

When reading the announcement, the SCCM should pause at key points in order to allow the Cabin Crew time to demonstrate and check passenger compliance.

Securing Loose Items

Passengers should remove and stow all loose sharp items from their person, and secure them in an overhead bin, closet or under a seat.

Securing the Cabin

Securing the cabin includes but is not limited to:

- Seat belts fastened



- Seat backs in the up-right position
- Tray tables closed and latched
- Armrests down
- Carry-on baggage stowed and secure
- Overhead bins closed and latched
- Aisles clear of all obstructions
- Service items cleared
- Cabin dividers open

When the passengers and the cabin have been secured, areas such as lavatories and galleys need to be correctly secured. All lavatories should be vacated and locked. All galley equipment should be stowed and secured:

- Close and lock all containers
- Ensure that carts are correctly stowed and secured
- Switch off all galley power and pull all galley circuit breakers

The Bracing Position

The bracing position is one of the most important items in preparing for an emergency. The bracing position has a dual function. Firstly, it reduces the extent of body flailing, as passengers must lean or bend over their legs. Secondly, it protects the head from hitting a surface. Remaining in the Brace position (until the aircraft comes to a final stop) will help to protect from injury during primary and secondary impact. Pregnant women and passengers traveling with infants will need to be shown the correct alternative Brace positions. It is recommended to use the “Safety Information Card” to illustrate the Brace position. The Cabin Crew will:

- Point out the “Brace” position on the safety information card
- Demonstrate recommended bracing position
- Check “Brace” position and alternative “Brace” positions

It is important to ensure that the passengers understand how to “Brace” for impact correctly, to reduce injury. (Recommended brace positions vary as per regulatory requirements)

Once the brace position has been explained, the next step is to inform the passengers when to assume the brace position, for example: “When you hear the Crew shouting “Brace, Brace, Brace”, this will be your signal to take the “brace position”, you must remain in this position until the aircraft has come to complete stop”.

Emergency Exit Locations

Cabin Crew will need to point out the location of the nearest emergency exits and the floor proximity exit path lighting.



Able Bodied Passengers (ABPs)

Identify and locate Able Bodied Passengers (ABP) who could help open exits, and assist with passengers during evacuation. The selection of “Able Bodied Passengers” may be based on their ability to understand instruction, their physical ability, and their ability to stay calm. The selection of the ABPs is the responsibility of the Cabin Crew. Some suggestions for the role of ABP include:

- Deadheading Crew members and off duty company Crew members travelling as a passenger
- Military personnel
- Police
- Fire personnel
- People who are willing and respond well to instructions

Deadheading Crew/off duty company Crew members, military, police, and/or fire service personnel are good choices, because they are used to following instructions, and have the required manual dexterity. Ideally, select a minimum of three ABPs per exit, and reseat them at the exit. However, make it clear that they will only open the exit in the event of the Crew member being incapacitated. An ABP should be briefed to replace the Cabin Crew in case the Crew member becomes incapacitated. The Cabin Crew should brief the passenger on the following:

- How to assess conditions outside the aircraft, for example, identify exit usable/unusable
- How to open the exit
- Where to find the manual inflation handle
- How to protect oneself from going overboard, and to remain in the assist space
- Commands to be used during evacuation, i.e. **“Jump and slide”** or **“Sit and slide”**.
- The other two ABPs should be briefed on how to assist the Crew during the evacuation, by:
- Holding passengers back during door opening and slide inflation
- How they can assist during the evacuation by remaining at the bottom of the slide to assist the other passengers

The Cabin Crew should brief the ABPs seated at over wing exits:

- How to assess the outside conditions
- When to open the exit
- How to open the exit
- Commands e.g. **“Come this way”**, **“Step out”**, **“Follow the arrows”**, **“Run and Slide”**
- How to redirect passengers if an exit is an unusable-block exit

The Cabin Crew should ensure that an ABP is assigned to passengers that require assistance to evacuate the aircraft. These passengers include:



- Disabled
- Elderly
- Unaccompanied minors
- People traveling alone with more than one child

These passengers will need assistance from ABPs during the evacuation. When time permits reseat an ABP the passenger that they are assigned to

When the cabin has been secured, and the cabin preparation is complete, the SCCM will notify the Flight Crew. The SCCM should also ask for an update of the situation, and the amount of time remaining. The cabin lighting should be adjusted. Cabin Crew should take their seats, adjust the harness, begin a “silent review”, and be prepared to “brace”, when the command comes from the Flight Crew.

3.18 THE EVACUATION PROCESS

When the aircraft has come to a complete stop, Cabin Crew need to assess inside and outside conditions, such as: What is the condition in the cabin, is there fire or smoke, is it safe to open the door, and is the area below free of smoke, fire, obstacles and debris, has the aircraft landed in water or on land?

The Cabin Crew would call or instruct passengers to go to their nearest available exit. Again, using a strong voice the commands will act as a beacon for passengers, especially if visibility is limited, due to smoke being present in the cabin. Cabin Crew can use their flashlight to call passengers to their specific door. Instructing passengers to leave their belongings is important, as baggage carried to the door of the aircraft impedes or delays evacuations, and causes pile-ups at the bottom of the evacuation slide.

Cabin Crew should protect themselves by holding on to the “frame assist handle”, staying in the dedicated assist space located on either side of the door. This prevents them from being pushed overboard in the event of a rush of passengers, and will not interfere with passengers exiting from the aircraft.

When safe to do so Cabin Crew would open the aircraft door in the “Armed” mode. Note: Some aircraft types require some doors to be disarmed in a ditching.

Cabin Crew should ask passengers to hold other passengers back until the slide is fully inflated.

If the slide does not inflate, and the Crew member needs to pull the “Manual Inflation Handle”, extra time may be required. Passengers must be held back until the slide is fully inflated and ready for use. The Cabin Crew would then check that the slide is fully inflated, before sending passengers down on



it. If two Cabin Crew are assigned to one exit, one should manage the passengers while the other checks the conditions (i.e. correct slide inflation, and the outside conditions).

3.19 PROTECTIVE POSITION

Cabin Crew should use their protective position, which is a dedicated assist space on either side of the door and firmly grasping the frame assist handle, and position themselves correctly to prevent from being pushed out of the exit or from interfering with evacuating passengers.

3.20 SLIDE EVACUATION WITH INFANTS AND YOUNG CHILDREN

In a prepared Emergency evacuation the Parent/Guardian should be briefed to hug the child to them so that they can evacuate down the slide.

Boarding an escape device with infants:

When boarding an escape device (single or dual lane escape slide, slide raft, ramp slide) with infants, jumping on the escape device produces faster egress than sitting and sliding.

The carrying positions that provide the most protection for the infant would include:

Vertical position: The guardian should protect the head and neck as much as possible with one hand, placing the other arm around the buttock and hold the infant with their legs around the adult's waist.

Horizontal position: The guardian should cradle child's head and neck in his/her arm and should keep child's arms, legs and feet enfolded as much as possible in his/her arms.

Horizontal position: The carrier guardian should cradle child's head and neck in his/her arm and should keep child's arms, legs and feet enfolded as much as possible in his/her arms.

Evacuating through Type III over wing exit with infants

Climbing through a Type III over wing exit while holding an infant, promotes a faster egress than passing the infant to another passenger who has already exited. Recommended carrying position:

Vertical holding of the infant is preferred. Horizontal carrying of larger infants is more likely to result in striking a part of the infant's body on the exit frame.

Evacuation methods with small children of age higher than 2 years would depend on the age and size of the child. The carrying method when egressing would be those most comfortable and natural for



the parent and the child, at the same time providing adequate protection for the child and ensuring a fast egress from the aircraft.

(Reference EASA Safety Information Bulletin (SIB) No.: 2013-06, Issued: 17 May 2013, Evacuation of Infants)

3.21 CROWD CONTROL

Crew members must have absolute control of the situation, and be assertive in the way commands and instructions are given to passengers. Not all passengers will react in the same manner. Some evacuations have been quite efficient because passengers have co-operated with the Crew members instructions. Other evacuations, especially where a life-threatening situation has been perceived, have created a varying range of reactions:

- Panic (screaming, crying, hysteria)
- Negative panic (does not react, frozen)
- No perception that danger exists
- Will insist on leaving by the door they entered
- Exiting with carry-on baggage
- Returning to seat to re-stow baggage
- Wanting to take control of evacuation
- Pushing
- Jumping over seatbacks to get ahead, disregarding others

People who have been involved in evacuations observed the above types of behavior. There is an absolute need for Crew members to assert their authority, in order to avoid delays in getting passengers down the slide and away from danger.

Flow Management

Cabin Crew will need to monitor the evacuation, and try to maintain an even flow of passengers from each exit. On larger aircraft with for example a 3-class cabin configuration, the aft and the middle zones are usually more congested than the front of the aircraft during an evacuation. It may be necessary to redirect passengers to avoid congestion, and maximize the use of all exits. Monitor the progress of the evacuation, and ensure that the slide is clear at the bottom, and that there are no pile-ups. It is useful to ask two or three passengers to assist at the bottom of the slide. The Crew members should use commands such as:

- **“Stay at the bottom”**
- **“Help people off”**
- **“Send them away”**



Passenger help at the bottom of the slide significantly reduces the risk of congestion and injury. Maintain the flow of the evacuation using commands, such as:

- **“Jump and slide”**
- **“Form two lines (double lane slide)”**
- **“Form one line (Single lane slide)”**
- **“Keep moving”**
- **“Hurry”**

Crew members also need to be aware of any developments during the evacuation. For example, if the slide becomes damaged, or there is fire in the area, or any other factor that renders the exit unusable. The Crew member must “Stop” the evacuation at that door, “Block” the exit, and “Redirect” passengers to the “Nearest usable exit”. Rescue and Fire Fighting Services at airports will use standard ICAO signals to indicate hazards to the Cabin Crew. When redirecting passengers Crew members need to be aware of which exit to direct passengers to. Listen for another Crew member giving the command to “come this way” or “Jump”, indicating that the exit is usable. Redirect passengers to the usable exit. Use positive commands:

1. **“Blocked exit” (Arms crossed in an x)**
2. **“Go across”**
3. **“Go forward”**
4. **“Go to the back”**
5. **“Go that way” (Pointing)**

When the flow of passengers has ceased, Cabin Crew will need to check the cabin for any remaining passengers. If the cabin is in darkness, use a flashlight to check the cabin. Check the following areas:

- Aisles
- Seats (including the floors area between the seats)
- Galleys
- Lavatories
- Crew rest areas
- Flight deck area

After all remaining passengers have been evacuated, or if it is not possible to remain in the cabin, Cabin Crew should evacuate through the first available exit after taking the applicable emergency equipment from the aircraft. Once outside the aircraft, the Crew members are responsible for the passengers, until they are relieved by the emergency services or by the authorities:

- Direct passengers away from the aircraft (upwind, if possible)
- Assemble passengers and keep them together
- Assist passengers – give first aid
- Ensure ‘No Smoking’ in the area



3.22 THE EFFECT OF SMOKE AND FIRE DURING EVACUATION

It has been well documented in accident reports, that smoke and fire in the cabin has presented frequent obstacles during evacuation. Smoke or fire in the cabin can also cause a tremendous amount of panic amongst the passengers. Inhalation of smoke and toxic fumes has incapacitated people, and limited their physical and mental ability to the extent that they have not been able to react, operate the exits or evacuate. Smoke has the ability to obscure light, make visibility difficult and to incapacitate a person.

In the event of a smoke filled cabin during evacuation, visibility and air quality is usually improved at floor level, so passengers may be instructed to get down low and follow the escape path lighting to the exits.

3.23 EVACUATION – CABIN CREW

Prior to exiting the aircraft, the Cabin Crew should check the passenger cabin to ensure all passengers have evacuated. When the Cabin Crew area is empty or when it is no longer safe to remain on board the Cabin Crew should evacuate using their nearest available exit and bring with them any emergency equipment they were responsible to take from the aircraft. (E.g. megaphone, first aid kit, flashlight, etc.)

3.24 POST-EVACUATION

Once outside the aircraft the Cabin Crew is responsible for the passengers until relieved by the authorities or emergency services. Until this help arrives the Cabin Crew should:

- Direct passengers upwind and away from the aircraft
- Assemble passengers
- Direct passengers away from fuel, fire and vehicle and ensure no electronic devices are used in the vicinity
- Enforce No-Smoking
- Assist passengers and provide first aid
- Start survival planning (if in a remote location away from an aerodrome/airport)



3.25 DITCHING

A ditching is an emergency landing on water and is a relatively rare occurrence in commercial aviation. During a planned ditching the Cabin Crew will have prior notice, and therefore, sufficient time to prepare the cabin, or to advise passengers to put on their life vests. An inadvertent water landings (referred to as unplanned ditching) leaves no time for the Cabin Crew to prepare neither the passengers nor themselves, for example, the donning of life vests. The evacuation procedure would be in accordance with the aircraft type and exits: over wing exits, slides, slide-rafts, main deck only or upper deck etc. and as per the manufacturer recommendations.

3.26 SURVIVAL POST-DITCHING

After separation of the slide raft or raft, Cabin Crew should stay clear of the aircraft and debris. If in a remote location, once the passengers and Crew are safe on a life raft, the Cabin Crew should close the canopy and activate the radio beacon immediately; ensure to tie it to the life raft. If more than one radio beacon is available only launch one at a time. Look out for other rafts and tie them loosely together by using the lanyards. Launch flares (when the Crew sees potential rescuers), drop sea dye-marker in water (during daylight), aim flashlight or signaling devices at noises, launch sea anchor, etc. Flight Crew or Cabin Crew shall take command of the raft and delegate duties to other occupants. Ensure that no one removes their life vests.

3.27 FIRE

An on board fire has the potential to consume an aircraft quickly. Prevention is important and the prompt response to an actual fire by all Crew members is critical. Therefore each Crew member must be familiar with the location and the operation of firefighting and protective equipment.

3.28 PREVENTION AND EARLY DETECTION

Fires are a serious event on board an aircraft. To prevent an on board fire the Cabin Crew must eliminate any potential hazard, situation and detect the source of the fire early. The Cabin Crew should be on alert for fire hazards such as paper/debris in overhead compartments and ovens, spilled fats or oils in ovens, cigarettes or smoldering items in waste containers, electrical appliances such as ovens, coffee makers, refrigeration units, trash compactors, passenger and crew cabin baggage including personal electronic devices and dangerous goods.

Cabin Crews play an important role in fire and smoke prevention. Some SOP's to assist with the mitigation of these events include, but are not limited to:



- Cleaning up spills in ovens
- Checking content of ovens before turning them on
- Ensuring oven inserts are installed and are clean (free of paper, labels, spilled fats or oils) and undamaged
- Checking service items and containers to ensure fit for purpose
- Checking no foreign items to be placed in ovens
- Ensuring lavatories are kept tidy, waste bin flaps are closed and smoke detectors are not obstructed.
- Checking correct use of in seat power supply and on charging of devices

Fire protection is an integral part of the design of the modern aircraft. In the passenger cabin all Cabin Crew and passenger seats are fire blocked, lavatories are equipped with smoke detectors, and automatic fire extinguishers in each waste container in the lavatory. Crew rest areas are equipped with smoke detectors and extinguishers. Yet, cabin fires still occur. Sometimes a fire may not always be obvious and smoke and flames may not always be visible, but there may be other indications that a potential fire is in progress. Signs to be aware of include:

- Fumes or unusual odors
- Electrical malfunctions, for example, circuit breakers “tripping”
- Noises, such as, popping, snapping or crackling, which may indicate electrical arcing
- Hot spots on sidewalls, floors, and panels should be investigated

If passengers or Crew member suddenly develop eye irritation, sore throats, and/or headaches, this may indicate that gas fumes are present, but may have not reached a level where they are visible. Cabin Crew must immediately investigate any reports from passengers that may indicate a fire. The aim is to locate and extinguish the source of a fire in the early stages. Fires can be complex, in order to fight a fire successfully Crew members need to know what they may have to deal with, therefore Cabin Crew should know the basics about fire chemistry and combustion and the different “classes” of fire.

3.29 FIGHTING THE FIRE

Time is critical and aggressive intervention is required. Locate and attack the source of the fire immediately as per the Airlines procedures. Cabin Crew must always advise the Flight Crew and the liaison with the flight deck must always be maintained. If the source of the fire cannot be identified, the Flight Crew shall be informed about that fact without delay. Other Cabin Crew will be required to bring additional back-up extinguishers and equipment (PBE, protective gloves and crash axe or crow bar, flash lights, etc.), remove flammable items/oxygen bottles in the vicinity, deactivate electrical switched or circuit breakers, remove carry-on luggage in the vicinity, close air vents, prepare wet blankets for standby, move passengers away, make an announcement in case of smoke to



passengers to cover mouths/nose with (wet) clothes etc. Emergency oxygen masks shall not be deployed.

To fight fires safely the Cabin Crew should:

- Advise the Flight Crew
- Use protective equipment such as gloves, PBE etc.
- Obtain assistance from other Crew members
- Don their full uniform (An extra layer such as a blazer/uniform jacket offers extra protection)
- Use caution when making holes/removing cabin panels to prevent damage to essential aircraft systems
- Use the proper extinguisher

3.30 HIDDEN FIRES

In January of 2004, the FAA issued Advisory Circular AC120-80, In-Flight Fires:

[http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgAdvisoryCircular.nsf/list/AC%20120-80/\\$FILE/AC120-80.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgAdvisoryCircular.nsf/list/AC%20120-80/$FILE/AC120-80.pdf) Advisory Circular AC120-80 was issued with emphasis on hidden fires, and the importance for Crew members to:

- Recognize the sources of smoke
- Rapidly assess conditions
- Take immediate action to gain access to fires that are behind interior panels

One of the first indications of a hidden fire may be smoke emitting from areas that cannot be accessed easily by the Cabin Crew, such as sidewalls, overhead panels, air ducts, ceiling panels, or cargo compartments. These hidden areas may have little, or virtually no access, and have very restricted or no visible way of being monitored. Smoke emissions from these areas are a definite sign of a problem. Many of these “hidden areas” involve wiring, air conditioning, and insulation, and may, in fact, hide a potential fire within the aircraft.

Smoke emitting from the seams/joints of a wall panel may possibly indicate electrical arcing that has ignited another piece of material. Smoke and fumes, due to contamination of the cabin air supply, may also infiltrate into the cabin. Items that are in the cargo compartments are another source to consider.

Immediate investigation of odors, fumes, unusual noises, and passenger observations that may relate to a smoke occurrence may save valuable time.

It is important for Cabin Crew to be aware of the potential sources of smoke on board the aircraft, and to familiarize themselves with these areas. This enables Crew members to determine the source of the smoke, and take immediate action:



Overhead Area

This area is above the ceiling panels. This overhead area includes wiring bundles, control surface cables, passenger emergency oxygen system, parts of the air conditioning system, and components of the aircraft's In-Flight Entertainment System (IFE).

Return Air Grill

These are the vents that are at the foot of the sidewall panels, on each side of the passenger cabin and in overhead Crew rest areas. Most aircraft air conditioning systems supply conditioned air from the cabin ceiling. This conditioned air then flows from the top of the cabin to the bottom, exits via the return grills, and finally leaves the aircraft via the outflow valves.

Cheek Area

This area is below the floor outboard of the cargo area. This area hosts hydraulic lines, electrical components and wiring bundles.

3.31 CABIN TO FLIGHT DECK COMMUNICATION

The importance of effective Crew communication, particularly in an abnormal or emergency situation is crucial. Ineffective (or lack of) communication amongst the Cabin Crew and the Flight Crew can contribute to the severity of an accident. Equally, effective communication between the Flight Crew and the Cabin Crew can mitigate the seriousness of an abnormal or emergency situation and improve a successful outcome.

Effective communication: The information that the Flight Crew receives from the Cabin Crew determines the course of action that the Flight Crew will take. Therefore, it is vitally important that the Flight Crew receives a realistic account of the events in the cabin, as they occur. If smoke or fumes are detected in the cabin, the Flight Crew should be informed immediately.

It is important to advise the Flight Crew immediately and report the conditions in the cabin in a clear and concise manner:

- State name
- Exact location of fire (if known)
- Source of fire (if known)
- Severity (density, color, odor, how it is affecting people) of fire and smoke
- Action taken and status of fire fighting



The Cabin Crew should never underestimate the severity of smoke and fire. Cabin Crew should be vigilant for indications of smoke or fire from hidden areas.

The UK CAA Paper 2002/01 Hidden Fires, Time to Become Non-Survivable shows the time to become Non-Survivable is taken from the first indication to the Crew of the presence of a hidden fire, to it becoming catastrophically uncontrollable:



Table 3 – Hidden Fires - Time to become Non-Survivable

DATE	LOCATION	A/C TYPE	NON-SURVIVABLE
26-Jul-69	Biskra, Algeria	Caravelle	26 minutes
11-Jul-73	Orly, Nr. Paris, France	B707	7 minutes
03-Nov-73	Boston, USA (Cargo Flight)	B707	35 minutes
26-Nov-79	Jeddah, Saudi Arabia	B707	17 minutes
02-Jun-83	Cincinnati International Airport, USA	DC9-32	19 minutes
28-Nov-87	Mauritius, Indian Ocean (Cargo Flight)	B747	19 minutes
02-Sep-98	Peggy's Cove, Nova Scotia, Canada	MD-11	16 minutes

3.32 USE OF EXTINGUISHERS

The use of Halon has generated some controversy and misunderstanding during recent years, however the FAA advisory circular AC120-80 'in-flight fires' issued in January, 2004, addresses the subject of Halon use, by stressing the effectiveness of Halon, when fighting in-flight fires.

"NTSB investigations of in-flight fires indicate that Crew members have been hesitant to use Halon extinguishers during flight because of mistaken ideas about the adverse effects of Halon. In one instance, a flight attendant went to the flight deck to inform the Flight Crew of a fire and asked the Pilot-in-Command whether to spray Halon in to a vent where she suspected a fire. The Pilot-in-Command instructed her not to use the Halon extinguisher, indicating he was concerned about spraying Halon in the cabin. In another instance, an off-duty company pilot considered using a Halon fire extinguisher, but decided against doing so because he was concerned that the Halon "would take away more oxygen". In each instance, the Crew members lost critical time and delayed the aggressive pursuit of the fire..."

"...The NTSB has expressed concern that the risks of exceeding the maximum recommended levels of Halon gas outlined in AC 20-42C Hand Fire Extinguishers for Use in Aircraft have been overemphasized in Crew member training programs, especially when compared to the risks of an in-flight fire. The NTSB emphasizes, "that the potential harmful effects on passengers and Crew [of Halon] are negligible compared to the safety benefits achieved by fighting in-flight fires aggressively". The toxic effects of a typical aircraft seat fire, for example, far outweigh the potential toxic effects of discharging a Halon fire extinguisher". (Source FAA Advisory Circular 120-80, January 2004).

Halon or BCF (chemical name bromochlorodifluoromethane, are member of the chemical family of Halogenated Hydrocarbons) is a liquefied gas that extinguishes fires by chemically interrupting a fire's combustion chain, as opposed to physically smothering the fire. This is one of the main reasons



why Halon is effective when the exact source of the fire cannot be positively determined. A small concentration of Halon in the air as a vapor will prevent a fire from continuing to burn. It is recommended to always wear a PBE when operating a fire extinguisher and fighting a fire.

3.33 WORKING AS A TEAM

The following is a recommended firefighting procedure that requires a team of at least three Cabin Crew. A team effort is the most effective way to combat an on board fire. The roles are defined as follows:

- The Firefighter
- The Communicator
- The Assistant Firefighter
- Support Crew Members (Runners)

Crew communication and coordination is important, and the roles of these three Cabin Crew complement each other, because their tasks are performed simultaneously, in order to optimize the firefighting effort.

The firefighter

The first Crew member that finds the fire will take the role of the Firefighter. This Cabin Crew:

- Alerts other Cabin Crew
- Obtains the nearest fire extinguisher
- Immediately locates the source of the fire
- Fights the fire

The communicator

Usually the second Cabin Crew on the scene informs the Flight Crew of the fire/smoke via the interphone. The Flight Deck door must be kept closed to prevent smoke from entering the flight deck. The Communicator maintains the communication link between the Cabin Crew and the Flight Crew, and informs the Flight Crew about the:

- Location
- Source
- Severity/Density (Color of smoke/odor)
- Firefighting progress
- Number of fire extinguishers used
- Time firefighting action started



- Maintains the communication link between the cabin and the Flight Crew, via an interphone that is near the firefighting scene
- Provides the Flight Crew with an accurate description of the firefighting effort, and of the situation in the cabin
- Depending on the intensity of fire or smoke, the Communicator may decide to don a PBE.

The assistant firefighter

The Assistant Firefighter must be prepared to replace the Firefighter, and exchange roles with the Firefighter, as required. The Assistant Firefighter is usually the third Cabin Crew on the scene and:

- Supplies extra firefighting equipment
- Supports the firefighting effort
- Removes flammable material from the area

Support Crew members (runners)

These Crew members are not directly involved in the firefighting effort, but will be required provide assistance (e.g. to relocate passengers, administer first-aid, calm and reassure passengers) and are also sometimes called runners. After any fire or smoke occurrence, one Crew member should be responsible for monitoring the affected area for the remainder of the flight, and should regularly report to the SCCM (SCCM). Additionally, it is important for Cabin Crew to maintain situational awareness as fire may be a distraction; in addition to the duties assigned here one Cabin Crew might be assigned to monitor cabin conditions for suspicious activity and/or security concerns.

3.34 PASSENGER MANAGEMENT

If there are passengers within close proximity to the fire, the Cabin Crew would move them away from the immediate area. If the amount of smoke or fumes is affecting the passengers, the Cabin Crew would encourage them to cover their nose and mouth with a cloth, to protect from smoke particles. Alternatively, and better still, distribute wet towels to the passengers, if available. The Cabin Crew would instruct passengers to protect themselves from smoke inhalation. If a passenger needs to be treated for smoke inhalation, and requires oxygen, the Cabin Crew must move the passenger away from the affected area, before administering the oxygen.

It is important to take into account the reaction of the passengers during an on board fire. Most passengers will express concern, or may even panic. Therefore, there is definite need for Crew members to be present in the cabin to calm and reassure passengers. Crew members who are not actively involved in the firefighting effort should remain in the cabin to give assistance where required. Keep the passengers informed, in a calm and reassuring manner, by telling them what is happening.



3.35 SMOKE, FUMES AND BURNING ODORS

Not all smoke, fumes and burning odors are related to a fire. For example, smoke may result from de-icing fluids being ingested by the engines, burning smells may be a new refrigeration compressor. Nevertheless, always report such incident and investigate to ensure no danger exists.

3.36 SMOKE IN THE CABIN

It is important that Crew members respond, report, and be aware of the indications of smoke. Identifying the source of smoke, and taking immediate action, will significantly minimize the risk of fire on board the aircraft. The existence of smoke may impact flight operations, cause flight diversions, and may result in delays, cancellations, declared emergencies, evacuations. In addition, the presence of smoke may physically affect passengers and Crew members, if it is not dealt with rapidly and efficiently. In conditions of excess smoke the Cabin Crew must advise the Flight Crew. In the interest in the overriding safety of the flight, it is important to ensure that the flight deck door remains closed to protect the flight deck Crew members from the smoke. The Cabin Crew should advise passengers to bend over, cover mouth and nose with clothing and maintain shallow slow breathing. The Cabin Crew should don their protective breathing device (PBE).

3.37 IDENTIFYING THE SOURCES OF SMOKE

In the main aircraft cabin, the only areas that have smoke detectors are the lavatory areas, the Crew rest areas and the Video Control Center. Therefore, smoke detection and fire suppression rely on human intervention.

It is wise to treat a smoke occurrence as a fire, until it has been proven otherwise. Keep in mind that the development of an odor, or smoke, takes some time to reach a level that is easily noticeable. Smoke occurrences in the cabin usually involve equipment that is easily accessible to Cabin Crew. It can be observed directly if it is coming from a coffeemaker, oven, a seat video screen, or a passenger seat control box. Sometimes the Cabin Crew may not see it, but may be alerted by an odor. In this case, the odor should be traced to its strongest location; in order to pinpoint the source of the smoke another indication may be a surface that is abnormally warm.

If the source can be identified, and is connected to an electrical source (for example: a coffeemaker) the circuit breaker relating to that coffeemaker should be pulled. If the source of the smoke cannot be identified, and is coming from the galley area, isolate the area by using the "galley shutoff", or by



pulling all of the galley circuit breakers to cut off the power source. In case of smoke emissions from any electrical source, first of all, remove the power source. Keep firefighting equipment readily available, in the event that the situation deteriorates.

3.38 LITHIUM BATTERY FIRES

The IATA Dangerous Goods webpages include some information related to Cabin Operations Safety. IATA, in conjunction with the Dangerous Goods Board and the IATA Dangerous Goods Training Task Force has developed 3 lithium battery outreach & awareness products:

- Lithium battery passenger pamphlet:
http://www.iata.org/whatwedo/cargo/dgr/Documents/LithiumBattery_PassengerFlyer.jpg
- Lithium battery booklet for shippers and acceptance staff
- Lithium battery awareness poster.
 - This information is available at:
<http://www.iata.org/whatwedo/cargo/dgr/Pages/lithium-batteries.aspx>

IATA and ICAO have developed the following procedures for Cabin Crew to address incidents involving lithium batteries and portable electronic devices. In addition to the guidance listed below, in order to mitigate possible events during critical phases of flight it is recommended for PEDs not to be charged during critical phases of the flight.

3.38.1 Cabin Crew Checklist for Fires Involving Batteries and Portable Electronic Devices (PED)



BATTERY / PORTABLE ELECTRONIC DEVICE (PED) FIRE / SMOKE	
Step	Cabin Crew Action
1.	<p>Identify the item</p> <p><i>Note. — It may not be possible to identify the item (source of fire) immediately. In this case, apply Step 2 first, and then attempt to identify it.</i></p> <p>Caution:</p> <p>In order to avoid injury from a flash fire, it is not recommended to open the affected baggage when there is any indication of smoke or flames</p>
2.	<p>Apply fire-fighting procedure:</p> <ul style="list-style-type: none"> i. Obtain and use the appropriate fire extinguisher ii. Retrieve and use protective equipment, as applicable to the situation iii. Move passengers away from the area, if possible iv. Notify pilot-in-command / other cabin crew members <p><i>Note. — Actions should occur simultaneously in a multi-crew operation</i></p>
3.	<p>Remove power:</p> <ul style="list-style-type: none"> i. Disconnect the device from the power supply, if safe to do so ii. Turn off in-seat power, if applicable iii. Verify that power to the remaining electrical outlets remains off, if applicable <p>Caution:</p> <ul style="list-style-type: none"> i. Do not attempt to remove the battery from the device
4.	<p>Douse the device with water (or other non-flammable liquid)</p> <p><i>Note.— Liquid may turn to steam when applied to the hot battery</i></p>
5.	<p>Leave the device in its place and monitor for any re-ignition</p> <ul style="list-style-type: none"> i. If smoke or flames re-appear, repeat Steps 2 then 4 <p>Caution:</p> <ul style="list-style-type: none"> i. Do not attempt to pick-up or move the device ii. Do not cover or enclose the device iii. Do not use ice or dry ice to cool the device



6.	When the device has cooled (e.g. approximately 10-15 minutes): <ul style="list-style-type: none">i. Obtain a suitable empty containerii. Fill the container with enough water (or other non-flammable liquid) to submerge the deviceiii. Using protective equipment, place the device in the container and completely submerge in water (or other non-flammable liquid)iv. Stow and (if possible) secure the container to prevent spillage
7.	Monitor the device and the surrounding area for the remainder of the flight
8.	After landing at the next destination: <ul style="list-style-type: none">i. Apply operator's post-incident procedures



OVERHEAD BIN BATTERY / PORTABLE ELECTRONIC DEVICE (PED) FIRE / SMOKE

Step	Cabin Crew Action
1.	<p>Apply fire-fighting procedure:</p> <ul style="list-style-type: none"> i. Obtain and use the appropriate fire extinguisher ii. Retrieve and use protective equipment, as applicable to the situation iii. Move passengers away from the area, if possible iv. Notify pilot-in-command / other cabin crew members <p><i>Note. — Actions should occur simultaneously in a multi-crew operation</i></p>
2.	<p>Identify the item:</p> <p>If the device is visible and accessible, or</p> <p>If the device is contained in baggage and flames are visible:</p> <ul style="list-style-type: none"> i. Re-apply Step 1 to extinguish the flames, if applicable ii. Apply Steps 3 to 5 <p>If smoke is coming from the overhead bin, but the device is not visible or accessible:</p> <ul style="list-style-type: none"> i. Remove other baggage from the overhead bin to access the affected baggage/item ii. Identify the item iii. Apply Steps 3 to 5 <p>Caution:</p> <p>In order to avoid injury from a flash fire, it is not recommended to open the affected baggage when there is any indication of smoke or flames</p>
3.	<p>Douse the device (baggage) with water (or other non-flammable liquid)</p> <p><i>Note.— Liquid may turn to steam when applied to the hot battery</i></p>
4.	<p>When the device has cooled:</p> <ul style="list-style-type: none"> i. Obtain a suitable empty container ii. Fill the container with enough water (or other non-flammable liquid) to submerge the device iii. Using protective equipment, place the device in the container and completely submerge in water (or other non-flammable liquid) iv. Stow and (if possible) secure the container to prevent spillage
5.	<p>Monitor the device and the surrounding area for the remainder of the flight</p>
6.	<p>After landing at the next destination:</p> <ul style="list-style-type: none"> i. Apply operator's post-incident procedures



OVERHEATED BATTERY / ELECTRICAL SMELL INVOLVING A PORTABLE ELECTRONIC DEVICE (PED) - NO VISIBLE FIRE OR SMOKE

Step	Cabin Crew Action
1.	Identify the item
2.	Instruct the passenger to turn off the device immediately
3.	<p>Remove power:</p> <ul style="list-style-type: none">i. Disconnect the device from the power supply, if safe to do soii. Turn off in-seat power, if applicableiii. Verify that power to the remaining electrical outlets remains off, if applicableiv. Verify that the device remains off for the remainder of the flight <p>Caution:</p> <p>Do not attempt to remove the battery from the device</p>
4.	<p>Instruct the passenger to keep the device visible and monitor closely</p> <p>Caution:</p> <ul style="list-style-type: none">i. Unstable batteries may ignite even after the device is turned off
5.	<p>If smoke or flames appear:</p> <ul style="list-style-type: none">i. Apply BATTERY / PED FIRE / SMOKE checklist
6.	<p>After landing at the next destination:</p> <ul style="list-style-type: none">i. Apply operator's post-incident procedures



PED INADVERTENTLY CRUSHED OR DAMAGED IN ELECTRICALLY ADJUSTABLE SEAT
Cabin Crew Action
Notify the pilot-in-command / other cabin crew members
Obtain information from passenger, by asking him/her: <ul style="list-style-type: none">i. To identify the itemii. Where he/she suspects that the item may have dropped or slipped intoiii. If the seat was moved since misplacing the item
Retrieve and use protective equipment, if available
Retrieve the item. Caution: <ul style="list-style-type: none">i. Do not move the seat electrically or mechanically when attempting to retrieve the item.
If smoke or flames appear: <ul style="list-style-type: none">i. Apply BATTERY / PED FIRE / SMOKE checklist
After landing at the next destination: <ul style="list-style-type: none">i. Apply operator's post-incident procedures

3.38.2 Amplified Cabin Crew Checklist for Fires Involving Batteries and Portable Electronic Devices (PED)

Note. - Although this guidance material presents sequences of tasks, some of these actions occur simultaneously when carried out by crew members.

BATTERY / PORTABLE ELECTRONIC DEVICE (PED) FIRE/SMOKE

1. IDENTIFY THE ITEM

It may not be possible to identify the item (source of fire) right away, especially if the fire has started in a seat pocket or the device is not readily accessible. In this case, fire-fighting procedures should be applied as a first step. Once it is possible to do so, identify the item after the fire is under control. If the item is contained in baggage, the crew's actions would be similar to the actions for a device that is visible or readily accessible.



Caution:

In order to avoid injury from a flash fire, it is not recommended to open the affected baggage when there is any indication of smoke or flames. However, in certain situations cabin crew members may assess and deem it necessary to slightly open baggage to allow entry of the extinguishing agent and non-flammable liquid. This should be done with extreme caution and only after donning appropriate protective equipment, available on the aircraft.

2. APPLY FIRE-FIGHTING PROCEDURE

Any occurrence concerning a fire in the cabin should be notified immediately to the pilot-in-command who should be kept informed of all actions taken and of the effect. It is essential that the cabin crew and the flight crew coordinate their actions and that each are kept fully informed of the other's actions and intentions.

Appropriate fire-fighting and emergency procedures must be used to deal with any fire. In a multi-cabin crew operation, the actions detailed in the fire-fighting procedure should be conducted simultaneously. On aircraft operated with only one cabin crew member, the aid of a passenger should be sought in dealing with the situation.

Halon, Halon replacement or water extinguisher should be used to extinguish the fire and prevent its spread to additional flammable materials. It is important to wear available protective equipment (e.g. protective breathing equipment, fire gloves) when fighting a fire.

If fire develops, cabin crew should take prompt action to move passengers away from the area involved and, if necessary, provide wet towels or cloths and give instructions for passengers to breathe through them. Minimizing the spreading of smoke and fumes into the flight deck is critical for the continued safe operation of the aircraft, therefore it is essential to keep the flight deck door closed at all times. Crew communication and coordination is of utmost importance. The use of the interphone is the primary means of communication unless the interphone system fails.

3. REMOVE POWER

It is important to instruct the passenger to disconnect the device from the power supply, if it is deemed safe to do so. A battery has a higher likelihood of catching fire due to overheating during or immediately following a charging cycle, although the effects may be delayed for some period of time. By removing the external power supply from the device, it will be assured that additional energy is not being fed to the battery to promote a fire.

Turn off the in-seat power to the remaining electrical outlets until it can be assured that a malfunctioning aircraft system does not contribute to additional failures of the passengers' portable electronic devices.



Visually check that power to the remaining electrical outlets remains off until the aircraft's system can be determined to be free of faults, if the device was previously plugged in.

The removal of power may occur simultaneously to other cabin crew actions (e.g. obtaining water to douse the device). Depending on the aircraft type, in-seat power may have to be turned-off by the flight crew members.

Caution:

Do not attempt to remove the battery from the device.

4. DOUSE THE DEVICE WITH WATER (OR OTHER NON-FLAMMABLE LIQUID)

Water (or other non-flammable liquid) must be used to cool a battery that has ignited to prevent the spread of heat to other cells in the battery. If water is not available, any non-flammable liquid may be used to cool the device.

Note.— Liquid may turn to steam when applied to the hot battery.

5. LEAVE THE DEVICE IN ITS PLACE AND MONITOR FOR ANY RE-IGNITION

A battery involved in a fire can re-ignite and emit flames multiple times as heat is transferred to other cells in the battery. Therefore, the device must be monitored regularly to identify if there is any indication that a fire risk may still exist. If there is any smoke or indication of fire, the device must be doused with more water (or other non-flammable liquid).

Caution:

- i. Do not attempt to pick-up or move the device; batteries may explode or burst into flames without warning. The device must not be moved if displaying any of the following: flames/flaring, smoke, unusual sounds (such as crackling), debris, or shards of material separating from the device;
- ii. Do not cover or enclose the device as it could cause it to overheat; and
- iii. Do not use ice or dry ice to cool the device. Ice or other materials insulate the device, increasing the likelihood that additional battery cells will reach thermal runaway.

6. WHEN THE DEVICE HAS COOLED (E.G. APPROXIMATELY 10-15 MINUTES)

The device can be moved with caution following a certain period, once it has cooled down and if there is no evidence of smoke, heat, or if there is a reduction in the crackling or hissing sound usually associated with a lithium battery fire (e.g. after approximately 10-15 minutes). The waiting period may



vary based on the device and its size. The different circumstances (e.g. types of devices, phase of flight, etc.) should be addressed in the operator's training programme.

A suitable empty container, such as a pot, jug, galley unit or toilet waste bin, must be filled with enough water or non-flammable liquid to completely submerge the device. It is important to wear available protective equipment (e.g. protective breathing equipment, fire gloves), when moving any device involved in a fire. Once the device is completely submerged, the container used must be stowed and, if possible, secured to prevent spillage.

3.38.3 Lithium Battery Fire Prevention – Portable electronic device inadvertently crushed or damaged in electrically adjustable seats

Lithium batteries are widely used as a power source in portable electrical devices. The overall rate of failures associated with the use of lithium batteries is very low when compared with the total number of batteries in use worldwide. Lithium batteries are required to be manufactured to high safety standards and are subjected to testing protocols including a crush test.

Nevertheless there have been reported incidents by airlines related to an incident on board as a result of the inadvertent crushing or damage of a portable electronic device (PED). This has raised safety concerns.

Small portable electronic devices (PEDs) such as mobile phones, smartphones, mini-tablets, e-readers or MP3 players etc. can become a potential fire hazard if they inadvertently slip or are dropped between the mechanical parts of an electrically adjustable seat and are crushed or damaged. These types of seats are primarily installed in premium class cabins such as First Class and Business Class.

Due to the design of some electrically adjustable passenger seats, it is possible that a PED can slip under a seat covering and/or cushion, behind an armrest or down the side of a seat. Cabin crew should not move the seat electrically or mechanically when attempting to retrieve the passenger's PED. The seat movement may crush/damage the PED's lithium battery and potentially result in a lithium battery fire.

Passenger awareness on how to use and stow their devices while in flight can help mitigate these incidents. This can be mass communicated to passengers via a verbal announcement, the inflight magazine, the inflight entertainment system (IFE), etc.

Recommended Practice

To prevent crushing of the PED and reduce the potential fire risk to the device and the surrounding area, cabin crew, and/or passengers ***must not use the electrical or mechanical seat functions in an attempt to retrieve a PED.*** Cabin crew should always advise the flight deck of the situation. Ask the passenger concerned to identify the item, and where they suspect it may have dropped or slipped

into, and if they have moved the seat since misplacing the PED. Move the passenger and, if applicable, the passenger seated next to the affected seat from the area. If available, don fire gloves before trying to retrieve the item. **Do not move the seat!** If unable to retrieve the item, it may be necessary to move the passenger to another seat.

In the event that the situation develops into a lithium battery fire, cabin crew should apply the following as per their respective airline procedures:

- Lithium battery fire-fighting procedures
- Post-event procedures (on board); and
- First point of landing offloading procedures

3.39 LITHIUM BATTERY EVENT PREVENTION

Preventing lithium battery events in the passenger cabin is important to flight safety. Airlines should be aware of the requirements to implement procedures as stipulated in the *IATA DGR 1.4.2.1(a)* for gate agents and Cabin Crew to seek confirmation from passengers, who surrender carry-on baggage at the boarding gate or aircraft for loading into the cargo hold, to ensure that the baggage item does not contain any spare lithium batteries.

See *IATA DGR 1.4.2 Information to Operator Employees, subsection 1.4.2.1(a)* which states in part: “...for passengers and handling staff and Cabin Crew the procedures to be followed to alert

passengers that certain items of dangerous goods are specifically prohibited from being in checked baggage, e.g. spare lithium batteries (see Subsection 2.3 of the IATA DGR’s) and must be removed from baggage where items of carry-on baggage cannot be accommodated in the cabin...”



What's your type?
Information for Airline passengers on Lithium Batteries

For more information contact your airline or visit: www.iata.org/dangerousgoods

Whether a lithium battery can be carried by air or not depends on its configuration and either Watt-hour (Wh) rating (for rechargeable) or Lithium Content (LC) (for non-rechargeable). Use the following table to determine if your battery is acceptable:

Watt Hour Rating (Wh) or (L) Content	Configuration	Carry-on Baggage	Checked Baggage	Operator Approval
≤100 Wh (L)	In Equipment	Yes	Yes	
	Spare	Yes (See Link)	No	No
>100 to ≤160 Wh	In Equipment	Yes	Yes	Yes
	Spare	Yes (Max 2)	No	Yes
>160 Wh	Must be presented and carried as Cargo in accordance with the IATA Dangerous Goods Regulations. To convert Amp-hours (Ah) to Watt-hours (Wh) multiply Ah x Voltage			

The terminals of all spare batteries must be protected from short circuit by enclosing them in their original retail packaging or taping over the terminals or separate plastic bags for each battery.

Spare batteries may not be placed in checked baggage.

Batteries contained in equipment such as laptop computers, cameras, mobile phones, etc must be switched off and measures taken to ensure that they cannot be accidentally activated when placed in checked baggage.

Examples of Lithium Batteries

- Small Lithium Batteries and Cells** include mobile phone batteries, watch batteries, MP3 player batteries and most original laptop batteries. The maximum rating for these batteries is 100 watt-hours (Wh).
- Medium Lithium batteries and cells** include larger batteries and cells - examples include some extended life batteries for laptop computers, and batteries used for professional professionals. A "medium" battery provides between 100 and 160 watt-hours of power.
- Large Lithium batteries and cells** are primarily those used in industry. A large rechargeable battery provides over 160 watt-hours of power. Large batteries may be found in some electric and hybrid vehicles, as well as mobility devices and scooters.

Note: Other commercially available types of batteries such as Ni-Cad, (nickel cadmium), and alkaline can be carried safely in either checked or carry-on baggage provided they are adequately protected against short-circuit.

Possible additional proactive mitigation strategies include but are not limited to, communications with passengers via the Airline webpage. The information should be straight forward, simple and clear with photos of various types of lithium batteries as passenger. Some Airlines also include additional information at the airport available on



electronic displays and at appropriate intervals along the check-in lines or self-check-in kiosks. Passengers are also asked questions to verify if there are any lithium batteries in their checked baggage. See the IATA Lithium battery passenger pamphlet below.

For hard copies please contact IATA Dangerous Goods at: dangood@iata.org



4 SECTION – SECURITY

ICAO Annex 17 to the Chicago Convention requires that all air carriers produce an Airline Security Program. Many Countries will require a copy of the air carrier’s security programs before allowing them to fly inside their borders. The primary objective of international civil aviation security is to assure the protection and safeguarding of passengers, Crew, ground personnel, the general public and facilities of an airport serving international civil aviation against acts of unlawful interference perpetrated on the ground or in flight.

4.1 IATA SECURITY MANUAL

The objective of the IATA Security Manual is to provide airline personnel, at all levels, with security reference material, guidance and information required to competently perform their duties. It provides the reader with an understanding of the present day principles of aviation security and various ideological considerations to meet future threats, and references material that will assist in the management of security tasks not common to the everyday operation.

With each new edition, IATA introduces the latest guidance and information to provide our airline members, aviation security stakeholders and other interested parties, with the indispensable tools required to manage the security demands of today and tomorrow. The manual will enable the industry and its stakeholders to further achieve the goal of implementing integrated, proactive, effective and cost-efficient security procedures. Topics related to Cabin Crew, include but are not limited to:

- Acts of unlawful interference
- Crew training programs
- Types of unlawful seizures
- Bomb threats
- Least Risk Bomb Location (LRBL)
- Cabin Crew Checklist for Inflight Chemical/Biological Suspected Weapons
- Prohibited items in the passenger cabin
- Catering Security
- Removal of Inadmissible Passengers, Deportees and Persons Travelling under Special Status (Prisoners)
- Human trafficking
- Unruly passengers

For the purpose of this manual we will not be including security sensitive information. Guidance, procedures and instructions related to Cabin Crew are considered sensitive information and are normally provided by the Airlines security department to relevant personnel in a manner that



protects the content from unnecessary disclosure. To order the IATA Security Manual: www.iata.org/publications/Pages/security-manual.aspx or contact securitymanual@iata.org

4.2 IATA SECURITY COURSE FOR CREW

For information on the IATA Security Course for Crew, offered by the IATA Training and Development Institute (ITDI): www.iata.org/training/Pages/index.aspx

4.3 SECURITY CHECKS

Cabin Crew (or other designated company personnel) must perform an inspection for left-behind objects and suspected articles. This should be conducted after catering and cabin cleaning, before passengers embark and after passengers disembark. It is recommended that each Cabin Crew be assigned specific areas to check and report to the SCCM when checks are completed. A checklist indicating the specific area to be checked should be available for Cabin Crew to use in order to assist with the task of Security checks. The check should include all compartments that are accessible and are in general use by Cabin Crew and passengers on a given flight

4.4 REINFORCED FLIGHT DECK DOOR

The principal intent of a reinforced flight deck door is to ensure the security of the flight deck by providing the Crew with appropriate guidance, procedures and instructions for use when a reinforced flight deck door is installed. Guidance, procedures and instructions related to flight deck security are considered sensitive information and are normally provided to relevant personnel in a manner that protects the content from unnecessary disclosure.

4.5 RESTRICTED AREAS

Cabin Crew should be alert for possible security breaches at all times. Only authorized personnel, screened baggage, mail and cargo have access to aircraft, airside and to restricted areas. Cabin Crew should report to the applicable authorities any situation that could affect security of a flight. Cabin Crew should challenge anyone attempting to gain access to a restricted area without authorization or proper identification or anyone entering a restricted area with an unauthorized object that could affect the safety of the flight.



4.6 REPORTING SECURITY BREACHES

When reporting a security breach to the Pilot-in-Command or to the applicable competent authorities, a Cabin Crew should report what the problem is, where and when it occurred, who noticed the situation and why it is a concern.

4.7 IDENTIFICATION BADGE

All Cabin Crew should be issued with a photo-identity card or badge, which should be worn, so as to be clearly visible when on duty in all secure areas or wear their identification badge as required and instructed by the applicable authorities. Cabin Crew should safeguard their identification badge at all times. Airlines should have appropriate policies in place to handle cases where badges are lost or stolen.

4.8 RETRIEVAL OF COMPANY ISSUED ITEMS AFTER TERMINATION OF EMPLOYMENT

It is recommended for airlines to have procedures for the withdrawal or retrieval of company issued identification badge/pass to restricted areas, ID cards, and other company required items (e.g. manuals, uniforms, etc.)

4.9 UNRULY PASSENGERS

Unruly Passengers hinder Crew members from performing their duties and thus constitute a serious threat to aviation safety. A clear company policy is obligatory to pro-actively address the issue within an airline. Crucial to the effectiveness of the process is the support of the airline's executive management at an early stage. A set of procedures offering specific guidelines on implementing the policy needs to be communicated to all front-line staff.

Many incidents involving unruly passengers have had an impact on flight operations with flights being diverted, delayed arrival and the knock back effect on the rest of the operation, including missed passenger connections, inconvenience, and the financial cost involved in diverting a flight. Many passengers and crew members have been extremely upset and frightened by the behavior of some unruly passengers.



Conflicts can take many forms. Some may be resolved through discussion and a satisfactory conclusion found, without further consequences. However, when a conflict becomes confrontational and hostile, it must be addressed immediately. Most important to consider is whether the behavior of the passenger poses a threat to the safety of the flight. If the conflict occurs on ground, it should be resolved before leaving.

In using conflict resolution it is recommended for Cabin Crew to:

- Listen, to allow the passenger to express his/her concerns, this helps to reduce tension
- Be courteous, but firm
- Address the issue, **what is right, not who is right**
- Appeal to reason, before resorting to authority
- Ensure Cabin Safety
- Be assertive
- Involve the Crew and the Senior Cabin Crew
- The SCCM should inform the Flight Crew
- Do not take personally

IATA has published Guidelines on Unruly Passenger Prevention and Management which can be accessed at the following link: www.iata.org/cabin-safety

In addition, IATA Recommended Practice 1724 General Conditions of Carriage; (Passenger and Baggage) provide Airlines with a useful guideline for dealing with difficult passengers, this includes Article 8, section 8.1 Refusal and Limitation of Carriage and Article 11, Conduct aboard Aircraft.

4.10 CREW PROTECTION

There are a number of things Cabin Crew can do to promote their personal safety and security while on duty. It is recommended to:

- Closely monitor room number exchanges with hotel staff and with other crew members
- Establish a buddy system to contact each other in case of fire or emergency at the hotel
- Note the room number of the Senior Cabin Crew
- Do not leave luggage unattended
- Ensure Name tags are discreet and home address is not revealed
- Not walk in questionable or dark areas on layover, especially when alone
- Review hotel exit routes, fire procedures and other procedures such as earthquake etc.
- Protect passport, and any other identification and valuables in hotel room (room safe)
- Always carry medication in original containers
- Not agree to transport packages or envelopes for others



5 SECTION – EQUIPMENT AND SYSTEMS

All aircraft are equipped with safety equipment and various systems. Airlines must ensure that Cabin Crew receive training that provides the knowledge required to understand the function and operation of cabin emergency equipment and to execute associated pre-flight checks. All Cabin Crew should be familiar with their location and use.

5.1 PRE-FLIGHT CHECKS

Usually prior to each flight, the Cabin Crew must ensure that all safety equipment in the cabin is operative. The Cabin Crew must check that it is available, accessible, functional and secured in its designated stowage location and sealed (if applicable).

5.2 INOPERATIVE EQUIPMENT

If any safety equipment is missing or is deemed inoperative, the Cabin Crew must immediately advise the SCCM to ensure the equipment is replaced or repaired as per the minimum equipment list (MEL). The SCCM will advise the Pilot-in-Command (PIC) who will advise engineering/maintenance personnel, and if applicable to company procedures, attach an “inoperative equipment tag” and make an entry in the cabin defect logbook.

5.3 USAGE OF EQUIPMENT

After using equipment the Cabin Crew should always advise the SCCM and the PIC. Return the equipment to its designated stowage location and if applicable to company procedures, attach an “inoperative equipment tag” (if equipment is no longer usable –example a depleted PBE or fire extinguisher) and make an entry in the cabin defect logbook.

5.4 MINIMUM EQUIPMENT LIST (MEL)

The minimum equipment list (MEL) is used by the PIC and maintenance/engineering and contains details as to which equipment (and under what conditions) may be dispatched inoperative and lists the items which may be missing as applicable to each aircraft type.



5.5 INOPERATIVE DOORS, EXITS OR SLIDES

Cabin Crew need to be aware of their company procedures for inoperative doors, exits or slides.

5.6 DOORS

Cabin Crew need to be trained on the aircraft door components and their function on aircraft they are qualified to operate. These include, but are not limited to:

- Door handle,
- Arming and disarming controls,
- Floor brackets,
- Hand grips, assist handle(s),
- Viewing window,
- Slide pack cover, girt bar (if applicable),
- Power assist (or no power assist),
- Door opening and closing procedures (normal and emergency operations both land and water).
- Associated escape devices including manual inflation handle, slide release handle, lanyard, lights, deceleration pad and breakpoint, apron slide handles
- Slide raft contents (if applicable): hand pump fitting, beacon light, boarding station, heaving line, hand pump, survival kit, canopy etc. And the contents of the survival kit which may contain: flare, mirror compass, flashlight (water activated) etc. and;
- Window exit components (if applicable): Exit handle, viewing window, assist handle, approx. weight (window exits are used in emergency operations only).

5.7 EQUIPMENT

5.7.1 LIFT VESTS

Life vests are available two sizes: adult/child and infant. These are usually found under each passenger seat or armrest (Premium cabin), at Cabin Crew seats and in designated life vest stowage locations (example for infant life vests and additional adult/child life vests).



5.7.2 EMERGENCY LOCATOR TRANSMITTER

Cabin Crew need to be aware of the location and operation of the emergency locator transmitter/s both for on water and on land.

5.7.3 SEAT BELTS

All passenger and Crew seats will be fitted with a seat belt (or safety harness/Crew) to restrain all occupants. The Cabin Crew should be aware of the operation of all seatbelts on board, including seat belts equipped with air bags. The Cabin Crew should report to the PIC if any seat belts are not properly anchored or functioning properly (mechanism).

5.7.4 RESTRAINING DEVICES

Some Airlines provide restraining handcuffs or ties for Cabin Crew to utilize in the event of an unruly passenger event requiring restraining. Cabin Crew should be aware of their location and use.

5.7.5 CABIN CREW STATIONS

Cabin Crew stations vary as per aircraft type. Components include, but are not limited to: jumpseat/spring loaded seat, lap belt/shoulder harness (retractable/non-retractable).

5.7.6 PASSENGER SEATS

Passenger seats vary as per aircraft size and features as per commercial considerations. However, most have the following components: seatbelt, seat recline button, a reclining seatback, underneath stowage area for carry-on baggage, life vest stowage location, etc. Electric seats usually include:

- A recline mechanism
- Leg rest mechanism
- As well as other attached features such as the controls for the IFE.



5.7.7 PASSENGER ADDRESS SYSTEM (PA)

The PA enables Crew members to perform an announcement or broadcast. Speakers are located throughout the aircraft cabin, including the lavatories and galleys and in the Crew rest areas.

5.7.8 MEGAPHONE

A megaphone is a battery operated loudspeaker that enables Cabin Crew to give instructions to passengers and Crew during or after an evacuation (outside of aircraft).

5.7.9 SAFETY DEMONSTRATION KIT

The safety demonstration equipment kit usually contains: Seatbelt, Life vest, Oxygen mask, Safety Features Card.

5.7.10 PASSENGER SAFETY INFORMATION CARDS

A passenger safety information card is at each seat and must be visible from the seated position. Airlines may provide braille and large print safety features cards to provide information to passengers who are visually impaired and who can read braille or large print. These may be distributed to the passenger during the personal pre-flight safety briefing.

5.7.11 EMERGENCY FLOOR PATH LIGHTING

The aircraft is fitted an emergency floor path lighting system to assist passengers and Crew in an evacuation in both darkness and smoke filled cabins. Other fixed emergency lighting systems include: ceiling flood lights, exit lights and exterior lights.

5.7.12 SMOKE DETECTORS

Aircraft are fitted with smoke detectors in the lavatories, Crew rest areas and main deck cargo compartments on COMBI aircraft.

5.7.13 FIRE EXTINGUISHERS

For the recommended number and location of portable fire extinguishers, see IOSA CAB 4.2.5.

Lavatory extinguisher: All lavatory waste containers are equipped with a self-activating extinguisher.



5.7.14 PROTECTIVE BREATHING EQUIPMENT (PBE)

Protective Breathing Equipment (PBE) to provide protection from smoke/fumes must be installed:

- Adjacent to each hand-held fire extinguisher as specified in IOSA CAB 4.2.5, or adjacent to each required Cabin Crew station, whichever is fewer;
- Where a hand-held fire extinguisher is located in a cargo compartment, outside but adjacent to that cargo compartment.

5.7.15 FIRE FIGHTING KITS

Some Airlines equip their aircraft with a firefighting kit with equipment for the Cabin Crew to use to effectively fight an on board fire. The firefighting kit usually contains protective gloves and a crow bar.

5.7.16 AXE

The axe is located in the aircraft as per regulatory requirements and security considerations. The Cabin Crew must ensure that passengers do not have access the axe or compartment where the axe is located.

5.7.17 FIXED OXYGEN SYSTEM

Aircraft are equipped with fixed oxygen systems that would provide oxygen to passengers and Crew in the event of a depressurization. There are two types of oxygen systems, depending on the aircraft type: Gaseous system and Oxygen generator based system. **Oxygen Masks and Location:** In the event of a depressurization oxygen masks would drop down from compartments in the ceiling above each row of seats, Cabin Crew seat, Crew rest bunk and lavatory.

5.7.18 PORTABLE OXYGEN BOTTLES

Portable oxygen bottles are on board as per regulatory requirement. There are used for post-decompression or to administer to those with medical problems.

5.7.19 FIRST AID KIT AND MEDICAL KIT

The recommended number and contents of these kits can be found in Section 5 (Cabin Operations) of the IOSA Standards Manual in section CAB 4.2.1, CAB 4.2.2 and CAB 4.2.3.



5.7.20 UNIVERSAL PRECAUTION KIT

The recommended number and contents of those kits can be found in Section 5 (Cabin Operations) of the IOSA Standards Manual in section **CAB 4.2.3**.

5.7.21 AUTOMATIC EXTERNAL DEFIBRILLATOR (AED)

See Section 5 Health and Medical Care on Board of this document and Section 5 of the IOSA Standards Manual (ISM).

5.7.22 ON BOARD WHEELCHAIR

Air craft equipped with accessible washrooms should be equipped with an on board wheelchair.

5.7.23 BASSINETS

Bassinets are usually provided for those travelling with infants.



6 SECTION – HEALTH AND MEDICAL CARE ON BOARD

Airlines should have a company policy in place to deal with medical events that occur on board. The contents of this section are based on the best industry practices and regulations known at the time of publication.

By using the guidelines in this section, an Airline will be following accepted industry standards worldwide. Actual Airline policies regarding the implementation of any of these guidelines are strictly a decision for each Airline to make based on its own commercial, operational and local government considerations. However, this section should be a great help to Airlines in reviewing and formulating their policies related to inflight medical care.

Some of the procedures are derived from IATA Resolutions, which mean they are mandatory for IATA Member Airlines.

In developing a policy, it is important to ensure that all the necessary Airline departments involved are identified and involved in the creation of the policy, such as:

- Medical or Occupational Health Department (or designated physician or clinic)– to ensure that medical equipment is adequate, appropriate and medico-legal requirements met;
- Safety and Training Departments – for training of Flight and Cabin Crew;
- Inflight Services – for communication with Cabin Crew and co-ordination of Cabin Crew welfare issues;
- Flight Operations – for agreement of procedures including communications with the ground;
- Legal – to deal with problems arising as a result of medical care provided to a passenger in flight.

6.1 EMERGENCY EQUIPMENT AND SUPPLIES

As per ICAO Standard and Recommended Practices (SARP's), airlines are required to carry First Aid kits.

It is also recommended that Airlines carry two other types of medical supplies:

- One or more universal precaution kit
- An extended medical kit (i.e. materials to be used by qualified medical trained persons) containing materials related to the operation.



6.2 NUMBER AND CONTENTS OF THE KITS

The recommended number and contents of those kits can be found in Section 5 (Cabin Operations) of the IOSA Standards Manual in section CAB 4.2.1, CAB 4.2.2 and CAB 4.2.3.

6.3 LOCATION

It is essential that the required first aid kits and universal precaution kits to be distributed as evenly as practicable throughout the passenger cabin. They should be readily accessible to Cabin Crew and, in view of the possible use of medical supplies outside the aircraft in an emergency situation; some should be located near an exit.

The extended medical kit, when carried, should be stored in an appropriate secure location, with a placard stating it is emergency equipment stowage and not for passenger use.

6.4 AUTOMATIC EXTERNAL DEFIBRILLATORS (AEDS)

The carriage of AEDs is determined by an operator on the basis of risk assessment, taking into account the particular nature of the operation. Airlines should ensure that they have established clear policies with respect to liability, maintenance, quality assurance and training standards – particularly the requirement for CPR (cardio-pulmonary resuscitation) training.

6.5 SURVIVAL EQUIPMENT

In addition to usual survival equipment carried for flights over water, a first aid kit should be carried in slide rafts so that it can be used for post-crash medical care.

6.6 TRAINING

Cabin Crew training for in-flight medical events should be in accordance with recommendations found in the IOSA Standard Manual Section 5 (Cabin Operations) See CAB 2.2.11.



6.7 CABIN CREW PROTECTION AND RESPONSIBILITIES

Airlines should ensure that their Cabin Crew manual contains specific company policies and procedures regarding the responsibilities of Cabin Crew in the case of a medical event. Such manual should contain information regarding first aid care, safety considerations, administration of medication and oxygen, use of medical equipment, calling for a physician, notification of the flight deck, medical contacts, etc. In addition, the necessary instructions should be provided so that Cabin Crew can ensure that appropriate medical assistance is ready upon arrival.

6.8 CABIN CREW PROTECTION

Airlines should include in their training programs procedures regarding the prevention of Cabin Crew injury as a result of handling syringes, needles, etc. and hygienic protocol to ensure the safety of the Cabin Crew (e.g. gloves, face masks, etc.).

6.9 CREW IMMUNIZATION

It is recommended that Crew be immunized in accordance with the recommendations of the World Health Organization (WHO) and their national public health authority.

6.10 CARRIAGE OF PASSENGERS WITH COMMUNICABLE DISEASES

The risk of any communicable disease being transmitted on board aircraft is limited. However, passengers and Crew can be exposed, with or without their knowledge, to communicable diseases, which are normally spread through close contact. Examples of such diseases are chicken pox, tuberculosis* and influenza.

For this reason, it is important for Airlines to ensure that they receive up-to-date information regarding countries where there is a greater risk of exposure to communicable diseases. It is therefore recommended that Airlines follow closely information and recommendations published by the WHO and make this information available to Cabin Crew travelling to the countries concerned.



In the event that Cabin Crew suspects that a passenger may suffer from a communicable disease, they should follow the IATA guidelines for Cabin Crew for suspected communicable disease found at: <http://www.iata.org/whatwedo/safety/health/Pages/diseases.aspx>

Note: *See also WHO report "Tuberculosis and Air Travel: Guidelines for Prevention and Control (2008) at: http://www.who.int/tb/features_archive/aviation_guidelines/en

6.11 CABIN DISINSECTION

Airlines should ensure that their ground staff and Crew members are properly informed about the procedures, safety of insecticides and the World Health Organization (WHO) recommendations on cabin disinsection. When establishing a policy, Airlines should try to obtain the most reliable information, for example, from national control authorities, regarding the risks involved and any imposed disinsection requirements. Cabin Crew should be aware of how to expel the disinsection spray in the cabin. They should ensure that passengers are informed as early as possible, preferably prior to boarding, that disinsection will be conducted. It is important for Cabin Crew to deliver a positive message to passengers when making announcements that cabin spraying has to be carried out.

6.12 CARRIAGE OF PERSONS REQUIRING SPECIAL ASSISTANCE

Where a passenger requires special assistance, an advanced information sheet should be completed at the time of reservation. It is important that Airlines ensure that this sheet is transmitted to the Cabin Crew where any assistance on board has been requested.

Airlines should assist passengers with a disability or reduced mobility in a manner compatible with the relevant safety regulations and operational considerations.

<http://www.iata.org/pressroom/pr/Documents/agm69-resolution-passenger-rights.pdf>

The information provided below stems from IATA Resolution 700 Acceptance and Carriage of Passengers Requiring Special Assistance and IATA Recommended Practice 1700b Carriage of Passengers with Reduced Mobility and Escorts.

In addition, ICAO provides a manual on *Access to air transport by persons with disabilities (Doc9984)*. To obtain a copy of this document, please visit: <http://store1.icao.int> Please note that the ICAO manual is purely guidance material and should not be interpreted as a regulation. However, also



important to note that a State may choose to follow, adopt, or exceed this guidance. This is determined at the individual State level. Airlines are reminded that they must always comply with the regulations of their respective State regulations.

Also important to note, IATA Member Airlines should be aware of the applicability of the U.S. Department of Transportation 14 CFR Part 382, Non-discrimination on the Basis of Disability in Air. This particular regulation is applicable to all carriers operating in the United States, including foreign carriers. For more information please contact the United States Department of Transportation (DOT) at: <http://www.dot.gov/contact-us>

6.13 DEFINITION OF PASSENGERS WITH REDUCED MOBILITY

IATA Resolution 700 defines a passenger with reduced mobility is understood to be any person whose mobility is reduced due to physical deficiency (locomotory or sensory), intellectual deficiency, age, illness or any other cause of disability and who needs some degree of special accommodation or assistance over and above that provided to other passengers. This requirement will become apparent from special requests made by the passengers and/or their family or by a medical authority, or reported by airline personnel or industry-associated persons (travel agents, etc.). The level of assistance required by the airport and/or the carrying member can vary depending on the different needs that the passenger with reduced mobility has when travelling by air.

6.14 CATEGORIES

Passengers with reduced mobility are categorized into various groups distinguished by passenger requiring assistance and medical cases. These are identified in airline messages by AIRIMP codes.

Passengers requiring assistance

BLND	(Blind Passenger) — specify if accompanied by seeing-eye dog or other service animal.
DEAF	(Deaf Passenger) – specify if accompanied by a service animal
DPNA	Disabled passengers with intellectual or developmental disability needing assistance (specify details)
MAAS	Meet and Assist (specify details)
SP	(Special needs passenger) – to be optionally entered after the



	passenger's name on the ticket.
WCHR 1	(Wheelchair — R for Ramp) — passenger can ascend/descend steps and make own way to/from cabin seat but requires wheelchair for distance to/from aircraft, i.e. across ramp, finger dock or to mobile lounge as applicable. When service animal is accompanying passenger, specify the type of animal in free text of SSR Item.
WCHS 1	(Wheelchair — S for Steps) — passenger cannot ascend/descend steps, but is able to make own way to/from cabin seat; requires wheelchair for distance to/from aircraft or mobile lounge and must be carried up/down steps. When service animal is accompanying passenger, specify the type of animal in free text of SSR Item.
WCHC 1	(Wheelchair — C for Cabin Seat) — passenger completely immobile; requires wheelchair to/from aircraft/mobile lounge and must be carried up/down steps and to/from cabin seat by trained personnel. When service animal is accompanying passenger, specify the type of animal in free text of SSR Item.
WCLB 1	Wheelchair – Lithium ion battery to be transported by a passenger which will require advance notification/preparation. Weight and dimensions may be specified. Wheelchair and battery must be claimed and rechecked at each interline transfer point.

Medical Cases:

LEGL	(Leg in cast) for passengers with a left leg in full cast or fused knew, (only to be used in conjunction with SSR code MEDA)
LEGR	(Leg in cast) for passengers with a right leg in a full cast or fused knew (only to be used in conjunction with SSR code MEDA)
LEGB	(Legs in cast) for passengers with both legs in full casts, (only to be used in conjunction with SSR code MEDA)
MEDA	(Medical case) company medical clearance may be required. Generally not to be used for passengers with reduced mobility who only require special assistance or handling. However, depending on the reason for reduced mobility, it may be necessary to have a medical clearance in some cases.



OXYG	(Oxygen) for passengers travelling either seated or on a stretcher, needing oxygen during the flight (only to be used in conjunction with SSR code MEDA)
STCR	Stretcher Passenger

6.15 BOARDING AND DISEMBARKING

Persons with disabilities who self-identify as needing assistance or additional time should be offered the opportunity to separately pre-board (i.e. prior to all other passengers) and disembark (i.e. before all other passengers). Assistance in getting on and off aircraft should be provided promptly to persons with disabilities.

6.16 MAXIMUM NUMBER AND ESCORT REQUIREMENT

In circumstances in which the number of passengers with reduced mobility forms a significant proportion of the total number of passengers carried on board, the number of passengers with reduced mobility should not exceed the number of able-bodied persons capable of assisting with an emergency evacuation. Passengers with reduced mobility, who are not able to reach an emergency exit without assistance in reasonable time, should be escorted. Escorts shall be at least 16 years old, physically and mentally able and willing to evacuate the disabled passenger in case of an emergency. (IATA Recommended Practice 1700b)

6.17 EVACUATION PROCEDURE

During an emergency evacuation, the Cabin Crew is responsible for passengers with reduced mobility who are able to reach an emergency exit without assistance in reasonable time. The Cabin Crew is responsible to the same extent as for other passengers. Passengers with reduced mobility requiring assistance to reach an emergency exit will be evacuated by their escorts. Depending on the situation Cabin Crew may assist. (IATA Recommended Practice 1700b)



6.18 SEATING

Persons with disabilities should be assigned seats that meet their needs, subject to safety requirements, for instance a seat with a movable armrest for a passenger who cannot easily transfer over a fixed aisle armrest; a seat that provides additional leg room for a passenger who cannot bend his or her leg (although not at an emergency exit); or a seat close to a lavatory or exit for a passenger with a mobility impairment. Once seats have been assigned, persons with disabilities should not be moved from the seats that are most appropriate for them, other than for safety reasons. In the event of an equipment change, persons with disabilities should be reassigned to an appropriate seat.

6.19 BRIEFINGS

The presence on board an aircraft of any of the categories of passengers mentioned requires special individual briefings prior to taxiing. Briefings should cover safety and emergency procedures, cabin layout and any specialized equipment supplied by the airline on board. Responsibility for such special briefing rests with each carrying airline's Cabin Crew. When the passenger requiring the briefing is capable of understanding the content, Cabin Crew should ensure that they give the individual safety briefing to the passenger and not just to the travelling companion or assistant. Airlines should provide individual safety briefings to persons with disabilities, where requested or required, in a manner that meets the passenger's needs. If individual safety briefings are provided, they should be done as discreetly as possible. Airlines should ensure that verbal descriptions are provided for information that is presented in a visual format and that verbal information is likewise also presented in a visual format. This will ensure that persons with sensory impairments have equal access to the same information provided to all other passengers. The use of pictures generally meets the needs of persons with learning disabilities. Upon request, aircraft operators should provide verbal, written or visual information about the equipment features of an aircraft, such as the location of call buttons and lavatory features.

6.20 WHEELCHAIRS

Passengers travelling with their own folding wheelchair or assistive device may request it to be carried in the passenger cabin where storage facilities are available. Where facilities do not exist, the wheelchair or assistive device will be loaded in the baggage hold where it is easily accessible for a timely return to the passenger.



6.21 ON-BOARD WHEELCHAIRS

An aircraft with accessible lavatory facilities should be equipped with an on-board wheelchair. An aircraft that is not equipped with accessible washrooms should carry an on-board wheelchair when a person with disabilities requests one, subject to the aircraft having the capacity to stow and restrain such equipment. On-board wheelchairs should be designed to permit the easy transfer of an occupant and easy maneuvering of the wheelchair. On-board wheelchairs should include footrests and armrests that are moveable or removable, an occupant restraint device, and wheel locks or other adequate means to prevent the chair from moving during transfer or turbulence.

6.22 ACCESSIBLE LAVATORIES

Where aircraft type, size and configuration permit, at least one lavatory should be accessible to persons with disabilities. Persons with reduced mobility are entitled to assistance in moving from their seat to an aircraft lavatory however, Cabin Crew are not required to lift a passenger or provide assistance in using the toilet facilities.

6.23 MOVEMENT IN THE CABIN

Cabin Crew should provide assistance to persons with disabilities in moving to and from an aircraft lavatory. Such assistance should not include hand-carrying the person.

6.24 PERSONAL CARE ASSISTANCE

Airlines are not required to provide personal care assistance to persons with disabilities. Examples of personal care assistance include the following:

- assistance with eating
- assistance in a toilet or with elimination functions
- provision of medical services, including administration of medication



6.25 CARRIAGE OF INCAPACITATED PASSENGERS

The carriage of incapacitated or disabled passengers is an important aspect of air travel. Acceptance of the incapacitated passenger for travel requires input from the airline medical department, coordinating, where appropriate, with the passenger's medical advisor and the airline's reservations, ticketing and operational departments.

6.26 MEDICAL CLEARANCE NOT REQUIRED

No medical clearance or special forms are required for those incapacitated passengers who only require special assistance in the airport, or in embarking/disembarking.

6.27 MEDICAL CLEARANCE REQUIRED

A medical clearance by the medical department/advisor of the Airline in contact with the passenger shall be required whenever the Airline in contact with the passenger(s) has received information that any passengers:

- May be suffering from any disease which is believed by such Airline or person to be actively contagious and communicable
- Who, because of certain diseases, or incapacitation may have or develop an unusual behavior or physical condition, which could have an adverse effect on the welfare and comfort of other passengers and/or Crew; (keep in mind that some countries may question or challenge this approach)
- Can be considered to be a potential hazard to the safety of the flight or the punctuality thereof (including the possibility of a diversion of the flight and unscheduled landing)
- Would require medical attention and/or special equipment to maintain their health during the flight
- Might have their medical condition aggravated during or because of the flight

Such passengers shall be subject to prior clearance for air travel by the medical departments/advisors of all carrying Airlines, prior to travel. The Airline's advisors will obtain relevant information from a licensed physician, familiar with the passenger's physical or mental condition. Subject to local laws on medical confidentiality, information must be provided when seats are requested on a flight of another Airline. Additionally, when an Airline receiving a request for travel has reasonable grounds for doubt about the passenger's incapacitation, such Airline shall require medical information for clearance purposes.



Airlines can deny transportation to passengers needing medical clearance, unless they meet the requirements of the carrying Airlines. **Note:** *IATA Resolution 700 taken from the Passenger Services Conference Resolutions Manual covers the transportation of incapacitated passengers.*

6.28 MEDICAL INFORMATION FORM

A completed MEDIF form or equivalent is required for each passenger (See a sample in the IATA Medical Manual):

- Whose fitness to travel is in doubt, as evidenced by a recent illness, disease, treatment, operation or other condition, OR
- Whose medical condition requires provision of special services, such as a stretcher, oxygen, and other medical assistance or the carriage of special medical equipment

6.29 FREQUENT TRAVELER'S MEDICAL CARD (FREMEC)

In order to facilitate air travel by regular passengers who are permanently or chronically incapacitated, any Airline's medical department may provide a standard Frequent Traveler's Medical Card (FREMEC) or equivalent. Please see the IATA Medical Manual: www.iata.org/Medical-Manual

The provision of such cards is governed by the Issuing Airline's terms and conditions. Whenever special assistance or handling is required, the Information Sheet for Passengers Requiring Special Assistance should be used to obtain the detailed requirements.

6.30 REFUSAL OR REMOVAL OF INCAPACITATED PASSENGERS

In the event Cabin Crew suspects that a passenger is not fit to travel, or may represent a danger to themselves or to passengers, they should inform the Pilot-in-Command and determine appropriate action in close co-ordination with ground staff.

If an incapacitated passenger is denied transportation at point of origin or at a connecting point, the Airline (or any person delegated by it) taking the decision to refuse or remove such passenger should be responsible for immediately notifying all down line transfer stations and the destination station shown on the passenger's ticket, and the originating Airline if known, stating the reason for such refusal/removal and full details of any consequent action taken or to be taken.



6.31 EQUIPMENT

The following equipment or service is to be provided in accordance with individual Airline policies and the respective government regulations:

- Wheelchairs
- Oxygen
- Incubators
- Stretchers
- Devices for supporting limbs
- Any other specialized equipment to support incapacitated passengers

6.32 USE OF OXYGEN

When oxygen is used, it is important to enforce the no-smoking policy. The Pilot-in-Command should be informed and an appropriate announcement made, and as applicable for the “No Smoking” sign to be cycled as a warning function.

6.33 STRETCHERS

The rules concerning the exact number of seats and the locations required for the installation of stretchers or similar devices (couches, divans, etc.) on board vary between carriers and aircraft types. Escorts are always required for passengers requiring a stretcher and they should be seated next to the passenger they are escorting and occupy a seat towards the aisle.

6.34 LOADING OF SPECIAL EQUIPMENT

Special equipment required by incapacitated passengers in connection with their trip, if not carried in the passenger cabin, should be loaded in the baggage holds where it is easily accessible for timely return to the passenger. Any such item must be properly identified and tagged, must always travel with the passenger, and should be loaded in such a way as to be readily and immediately available at transfer and destination points. (Resolution 745b, IATA Passenger Services Conference Resolutions Manual).



6.35 TRANSIT STATIONS

Incapacitated passengers requiring special assistance should normally be permitted to stay on board during transit stop (with their escorts), subject to the observance of applicable government or other safety rules.

6.36 DISEMBARKATION

Airlines should make arrangements for assisting incapacitated passengers in matters relating to inbound governmental clearance and baggage delivery. Wheelchairs and other assistive devices checked in should, within the shortest possible time, be delivered as close as possible to the door of the aircraft. However, the passenger may, at his option, use a station/airport wheelchair.

6.37 GROUP TRAVEL

Special arrangements should be made for the carriage of incapacitated passengers in groups. Such groups should be handled independently of individual incapacitated passengers. Safety: Travel by groups of incapacitated passengers should always be subject to applicable governmental and carrier air safety rules and regulations.

6.38 VISUALLY AND HEARING IMPAIRED PASSENGERS

Visually and hearing impaired passengers should be briefed individually. Visually impaired passengers may be briefed verbally, and Braille brochures may also be provided as a back-up briefing (as applicable to State regulations).

6.39 SERVICE ANIMALS

Passengers travelling with specially trained dogs (or other animals as approved by State regulations) should be assigned seats which allow space for the dog, near a floor level exit but which do not impede access to it. Dogs carried in the cabin should be properly harnessed and remain with the passenger throughout the flight. Cabin Crew, or other passenger, should not approach the animal.



Food and water should only be provided at the owner's request. Guidelines regarding service animals on board include the following:

- Aircraft operators should not impose charges for transporting service animals;
- Persons with disabilities and aircraft operators should take the steps necessary to comply with animal health regulations, if any, of the State of arrival, to permit the legal transportation of a service animal to the destination airport
- If the use of a service animal is required by a person with disabilities, aircraft operators should provide seating with sufficient space so that the animal can remain on the floor at the passenger's seat, in accordance with applicable safety regulations. This may require an extra seat to be provided by the aircraft operator or purchased by the passenger in order for there to be enough floor space for the animal to lie down, without extreme discomfort to the animal or the person with disabilities. The accommodation should ensure that the animal is able to carry out its duties without contravening safety regulations

The following should be considered when determining the required amount of floor space:

- A service animal should not have to remain in a "tight curl" for any significant period of time. The space should allow the animal to assume other positions besides curling up, especially on long flights
- Entry paths of seat rows affect the space available for a service animal to lie down. An entry path for this purpose is measured from the front of the seat cushion to the back of the seat in front, and should be wide enough for the animal to get in and out of the row without having to be squeezed through the space
- No part of a service animal should have to extend into an aisle in the way of carts or people walking
- Sufficient space is required to allow a person with disabilities to sit with his or her legs and feet in a position which will not result in the service animal lying on the person's feet or legs;
- The person with disabilities should be able to avoid having to place his or her legs over the service animal in a confined space, which may result in injury to the person if the animal is startled or gets up quickly for any reason

Emotional Support Psychiatric Service Animals

Emotional support or psychiatric service animals are usually not accepted on most domestic or international flights not flying inbound or outbound of the United States. However, Airlines should be aware of the applicability of the *U.S. Department of Transportation 14 CFR Part 382, Non-discrimination on the Basis of Disability in Air* as related to emotional support animals. Acceptance under this regulation usually includes:

- A dog is accepted as emotional support or psychiatric service animal.



- On U.S. codeshare flights (domestic, trans border, and international) and as per the United States regulations (DOT382), the Airline may be required to accept other types of emotional support or psychiatric service animals.
- It is recommended that the emotional support psychiatric service animal be harnessed and seated at the passenger's feet during flight.

For more information and to ensure compliance with the applicable regulations, please contact the United States Department of Transportation (DOT) at: <http://www.dot.gov/contact-us>

6.40 CANES

Canes used by passengers should be stowed during the flight in a manner to prevent it from sliding into the aisle or from obstructing access to emergency exits.

6.41 OTHER PASSENGERS REQUIRING SPECIAL ASSISTANCE

Expectant mothers and new-born infants

Expectant mothers are not regarded as Incapacitated Passengers and are normally accepted for travel without medical clearance unless there is any uncertainty of progress of pregnancy, time of confinement or expected complications in delivery. Medical clearance is recommended where it appears that confinement is expected in less than four weeks prior to the planned date of travel (8 weeks for multiple pregnancies) or if any complications in delivery may be expected. It is recommended that Cabin Crew are alerted via a notation in the PIL where medical clearance has been required.

Passengers beyond the 28th week of pregnancy should carry a medical certificate confirming the expected delivery date and that they are in good health.

Passengers with normal pregnancies and no previous history of premature labor can travel up to and including the 36th week. After that time, only short trips will be considered and after assurance by the treating physician that there is no sign of imminent delivery.

Air travel is not recommended for:

- Women within the last seven days prior to confinement and within the first seven days after delivery
- Healthy new-born babies, provided not prematurely born, may travel following the first seven days after birth
- Premature babies are not accepted within the first 7 days after birth, and then subject to medical clearance depending on individual airlines' policies



Seat belts: Expectant mothers should fasten their seat belts below the stomach. Where necessary, seat belt extensions should be provided.

Bassinets: The number of bassinets available will depend on the bulkhead location available on particular types of aircraft. Airlines should do all possible to inform passengers of the status and availability of bassinets on board. Effective co-ordination with ground staff is essential to ensure that special needs are reflected in the PIL.

Bassinets should only be used during cruise flight; otherwise babies should be restrained as per regulatory regulations. For more information please consult the IATA Medical Manual at: <http://www.iata.org/Medical-Manual> IATA Resolution 700 applies where medical clearance is required to travel.

Unaccompanied minors

Airline policies as per the designated age of an unaccompanied minor (UMNR) vary however; they are usually applicable to a child who is travelling alone and aged between 5 to 12 years of age. Each airline is responsible for the safe delivery of the unaccompanied minor to the receiving carrier at the transfer station or to final destination. For this purpose, it is recommended that airlines use a form to track the movement of each individual UMNR in its care. In this respect, the SCCM should ensure that the form is properly completed at the time of hand-over after boarding and disembarking from the aircraft. It is an important tool to track the movement of UMNRs at each hand-over point.

While the number of UMNRs carried on each aircraft is left to the discretion of each airline, it is highly recommended that airlines ensure that there is a sufficient number of Cabin Crew in proportion to the number of UMNRs in their care.

It is recommended that Cabin Crew:

- Ensure that ground staff have seated UMNRs together, in close proximity to Crew areas and toilets but never near an emergency exit
- Check on UMNRs frequently throughout the flight
- Do not serve alcoholic beverages to any UMNR
- Supervise UMNRs during meal times
- Provide a special safety briefing

Identification

Airlines should use a special identification tag/badge for unaccompanied minors, preferably containing the letters UMNR which children should wear throughout the flight.

Travel documents



Tickets and other travel documents including baggage identification tag(s), health certificates, etc. of unaccompanied minors should be carried in the charge of the Senior Cabin Crew; when this is not possible, these documents may be retained by the minor, preferably in a wallet provided by the carrier.

IATA Recommended Practice 1753 taken from the Passenger Services Conference Resolutions Manual contains guidance on the carriage of Unaccompanied Minors.

6.42 USE OF INFANT RESTRAINT DEVICES

Infants should be restrained for take-off, landing and whenever the fasten seatbelt sign is illuminated in an approved infant restraint device or held by an adult with their seatbelt fastened around the adult passenger only (not around the infant). Airlines should refer to national aviation requirements for information on approved restraint systems. Child seats used in flight must meet the requirements for aviation use.

6.43 INFANT FLOTATION EQUIPMENT

Airlines must carry appropriate infant flotation equipment and brief passengers on their location and use.

6.44 PASSENGER OF SIZE

Seatbelt extensions should be provided to passengers who are unable to fasten their seatbelt. Cabin Crew should be familiar with their airline's policy with respect to the seat allocation for such passengers so as to be able to deal effectively with any requests for seat changes on board.

6.45 PERIODIC ENQUIRIES

During a flight, Cabin Crew should make periodic enquiries concerning the needs of a person with disabilities or a passenger requiring special assistance.

6.46 HANDLING OF DEATH ON BOARD

In the event of a death on board, it is recommended that Cabin Crew follow IATA guidelines found at: <http://www.iata.org/health>



While only a medical doctor can formally pronounce a person dead, a person may be presumed dead (see guidelines). If an Airline has predetermined areas for stowing a passengers' body, and the body has to be moved to another part of the aircraft, it is essential that Cabin Crew move the body discreetly. For example, an aircraft wheelchair may be used, so as not to draw the attention of other passengers. The Pilot-in-Command must be informed of the death.

Close co-operation needs to be established with national governments and airport authorities to ensure that procedures are properly communicated to ground staff.

When a serious medical emergency has occurred on board resulting in the death of a passenger, the Crew needs to be trained in dealing with any of the accompanying passengers. There can also be lasting effects on the Crew involved. It is recommended that Airlines develop procedures to ensure that Crew members are properly supported after such incidents.

6.47 REPORTING OF MEDICAL INCIDENTS

In developing their medical care policy, Airlines need to determine what information needs to be reported and how it should be reported; the following elements should be addressed:

- Using a clear form or electronic support to ensure that incidents are well documented;
- Identifying a central point of responsibility to receive and manage the report;
- Determining the circumstances when actions should be taken;
- Defining and communicating what actions should be taken;
- Implementing a process to ensure that medical supplies, equipment , and training programs are appropriate to the type of incidents occurring

A sample Medical Incident Report form to be used by Cabin Crew to report incidents is available in the IATA Medical Manual: www.iata.org/Medical-Manual



7 SECTION – FOOD AND HYGIENE

This section is based on existing regulatory requirements and known airline best practices for world-wide use.

Cabin Crew play a crucial role in creating an airline's image to the customer and it is therefore important for the service delivered by Cabin Crew to meet airline management's expected quality standards. Equally important is the need for Crew to ensure that food and beverages served on board meet the highest standards of hygiene and safety. Minimum guidelines regarding the training of Cabin Crew in this respect are also covered in this section.

7.1 ACCEPTANCE OF CATERING SUPPLIES ON AIRCRAFT

Effective interaction between the caterer and Cabin Crew is particularly important. The Senior Cabin Crew Member acts as the interface with the caterer and should supervise the delivery of catering supplies onto the aircraft. It is therefore important that the Cabin Crew are informed of the type of service (e.g. full uplift, top-up, etc.), and what is being delivered on board, so that they are in a position to ensure that the delivery corresponds to the airline's catering order (ACO). In the case where a full service is not carried out, the SCCM should be responsible for checking on missing supplies, and communicating to the local station or the Caterer (as appropriate) of any additional items required.

The caterer should hand over to the SCCM a delivery sheet containing details of the meals uplifted and ensure that:

- Each item is placed in the correct location (this will vary depending on the aircraft, airline and flight involved);
- Food is well sealed and has been sufficiently protected against heat, dust and insects during loading;
- The time interval when food was taken out of the refrigerator and time loaded in the aircraft remains within the acceptable limits.

The SCCM should be satisfied that the delivery corresponds to the aircraft catering order (ACO) and in the event of a delay; that appropriate measures have been taken to prevent spoilage of food. (See also section 7.6 below).



7.2 CREW BRIEFINGS

In order to ensure the smooth running of the inflight food service, it is recommended that the SCCM review with the Crew the service plans for the flight, including time schedule for the meal service, special meal requirements, flight deck service and Crew meals.

7.3 MEAL AND BEVERAGE SERVICE TO THE FLIGHT CREW

Airlines should establish a clear policy for serving meals and beverages to the Flight Crew in accordance with aviation regulations, as applicable. To prevent the remote possibility of both pilots being incapacitated at the same time, it is recommended that the Commander and other Flight Crew do not eat the same meal and avoid certain types of foods which are particularly liable to cause gastro-intestinal symptoms (e.g. shellfish, crustaceans, etc.)

Beverages should be served separately from the meal in order to avoid spillage. No alcoholic beverages should be served to anyone on the flight deck at any time.

7.4 FOOD SAFETY AND HYGIENE

Food is responsible for the transmission of a large number of diseases. The subject of food sanitation and hygiene is sufficiently important that International Health Regulations govern the storage and handling of food. Various parties are involved in the responsibility – national health administrations, local health authorities, airline catering companies, airlines, aircraft manufacturers and catering equipment manufacturers – and all have an important role to play.

It is important to recognize that in view of the millions of passengers now travelling by air, the incidence of food-borne infections and allied disorders is remarkably small due to the vigilance of airlines and their catering departments and suppliers. There are many diverse authoritative books on the subject of food sanitation and it is recommended that airlines are guided by relevant resources such as the HACCP <http://www.haccponline.ca/home> and the *IFSA/IFCA Food Safety Guidelines* www.ifcanet.com/teams/foodsafety and other references found in this section. Also to note that in order to promote worldwide meal definition standardization, guidelines have been agreed as set out in IATA Recommended Practice 1773, Passenger Services Conference Resolutions Manual.

Hygiene and Sanitation

The World Health Organization (WHO) Guide to hygiene and sanitation was developed with the cooperation of IATA and can be found at the following link: <http://www.iata.org/health>



NOTE: WHO (World Health Organization) is currently revising its Guide to hygiene and sanitation in aviation which will include topics such as food, water, waste management, cleaning and vector control.

Risks and Prevention

Poor hygiene or unsatisfactory disposal of food wastes can result in the contamination of food and thus influence safety on board, either directly or indirectly in the following ways:

- Sudden incapacitation or collapse of a member of the Crew due to a short incubation type of food poisoning due to bacterial toxins;
- Subtle incapacitation in one member of the Crew at a critical phase of flight as may occur in cases where there is toxæmia prior to the onset of gastro-intestinal symptoms, as may occur in food poisoning;
- A suspected outbreak of acute food poisoning affecting a significant number of passengers, while in itself is a minimal risk, may influence the Flight Crew to divert to an alternative airport.

It is therefore essential that anyone engaged in the provision or handling of aircraft food is properly trained. Cabin Crew must equally be trained in the proper safety, hygiene and handling of inflight food and meet the following minimum standards:

- Company regulations and procedures;
- Essentials of food hygiene;
- Risks and precautions;
- Health requirements of Cabin Crew;
- Cabin galley features and use of all equipment;
- Use of protective clothing;
- Code of practice in handling food, cooking times, chilling, etc.;
- Personal hygiene;
- Special meals;
- Airline Catering Orders (ACO);
- Acceptance of the delivery of food on the aircraft;
- How to deal with cases of food poisoning.

7.5 PERSONAL HYGIENE

Cabin Crew should follow the same code of practice as food handlers on the ground. Prior to commencing food service, hands should always be washed with soap (preferably a non-perfumed liquid soap solution from a dispenser) and plenty of warm water. In addition, they should wash their



hands again if they have handled any article likely to be contaminated (e.g. an airsickness bag, waste, lavatories, etc.). Hands should be dried with a disposable towel - clothing should never be used to dry hands. Foods should never be touched.

Fingers should not be placed inside cups or glasses, and cutlery should be picked up only by the handle.

Cabin Crew with visible cuts/lesions should cover them with a waterproof dressing that is replaced regularly to keep clean. Crew should never sneeze or cough over food, utensils or galley working surfaces.

It is recommended that all Cabin Crew should be medically screened before employment. Airlines should give Cabin Crew the responsibility of confirming that they are in good health when signing on for duty, particularly when a staff member has suffered from sickness related to a gastro-intestinal disease or other food-related disease.

SCCM should supervise other Cabin Crew to ensure that they are following food safety and hygiene procedures.

7.6 DELAYED FLIGHTS

In the case of unexpected delays, after the food has been loaded on the aircraft, the length of the delay will determine the course of action to be taken.

The responsibility for determining the course of action will depend on individual airlines' policies and the prevailing circumstances.

However, once the Crew has accepted a delivery of food, it becomes the responsibility of the airline. In the event of delays of several hours, and if Cabin Crew have any doubts as to safety of the food, the caterer should be asked to examine the food and if necessary arrange for off-loading of food and the re-catering of the flight with completely fresh meals.

7.7 SUSPECTED FOOD POISONING

In the event a passenger or Crew member becomes ill during the flight due to suspected food poisoning, a Medical Incident report form should be completed. Cabin Crew should be appropriately trained in dealing with such cases, and further guidelines are set out on the IATA Health web page at: <http://www.iata.org/health>



7.8 SPECIAL ACTIONS

There are occasions when special action is needed during flight – for example when a sick passenger soils seats or carpets. This sickness might be the result of an infection - and apart from the nuisance caused to other passengers – there might be a health hazard. Since a major cleaning, involving the replacement of soiled seat covers cannot be undertaken until arrival at the next airport, the Cabin Crew should be supplied with appropriate material to decontaminate the area. Where possible, passengers should be re-seated.

In such cases, special cleaning is required. Crew should contact the next airport of call so that arrangements can be made beforehand and any delays can thus be avoided.

7.9 INSECTS

Insects are a source of contamination, and one of the most common foreign objects found in aircraft meals. Cabin Crew should keep a careful watch for insects and report their presence on board immediately to the Commander. Local regulations and individual airline policies will determine the action to be taken in this respect. (See also Section 5 – Health and Medical Care and the IATA Medical Manual).

7.10 SPECIAL MEALS

For the IATA meal definitions and codes please see IATA RECOMMENDED PRACTICE 1773 in the IATA Passengers Services Conference Resolutions Manual:

A passengers' special meal needs should be handled at the time of reservation, and reflected on the Passenger Information List (PIL), and the Cabin Crew should be familiar with the characteristics of the different meal types in order to be able to identify such meals and respond appropriately to passenger needs.

Special meals should be identified by the caterer by attaching a special meal tag or label to the cart or container that the meals are in. The number and types of special meals are listed on the Aircraft Catering Order (ACO). Crew should verify that the appropriate numbers of meals have been delivered and the passenger's name(s) and seat number correspond to the information provided on the passenger information list.



7.11 GALLEY EQUIPMENT

Food is stored in the galleys which vary depending on the size and type of aircraft. Cabin Crew should be trained in the proper use of all galley equipment in use on the aircraft.

7.12 GALLEY AND EQUIPMENT HYGIENE

It is the responsibility of Cabin Crew to ensure that the galley, equipment and working utensils are kept clean during the flight. Galley tops should be kept clean; stowage drawers and units should be kept clean and organized. Used items (e.g. glasses, trays, etc.) should be kept separate from clean items at all times.

7.13 GALLEY CHECKS

Galley checks must be performed during flight preparation (see Section 2).

7.14 DEFECTIVE GALLEY EQUIPMENT

Cabin Crew should identify and report any defective galley equipment immediately. It should be off-loaded, repaired and returned to service as soon as possible.

7.15 POTABLE WATER AND ICE

Airlines should take into account the length of the flight and ensure that there is sufficient potable water on board. The quality standards and sanitary regulations regarding the potable water systems on board aircraft are published by the World Health Organization (WHO)*.

Only ice cubes manufactured from potable water and delivered to the aircraft in sealed polyethylene bags should be put into drinks. Broken block ice must only be used for chilling bottles and cans. Ice should be served by proper tongs, and never handled by hand. For more information see the International Standards for Drinking Water: *WHO Guide to Hygiene and Sanitation in Aviation*.

IATA Drinking-Water Quality Pool (IDQP)



The IATA Drinking-Water Quality Pool (IDQP) was created by a number of airlines to share audits on drinking-water quality around the world. IDQP also developed its own procedures for conducting airfield inspections, using the highest quality standards.

Benefits

Benefits include safeguards the health on board for passengers and Crew by using the highest standards to ensure water quality, avoids multiple audits of the same provider at the same location and promotes substantial financial savings from reductions of airport inspection workloads and associated costs.

Why a pool for drinking-water quality? To avoid illnesses, all water for drinking and other personal use made available to Crew and passengers must be free from chemical substances and micro-organisms. The World Health Organization (WHO) and local authorities have therefore issued sanitary requirements for the chlorination and handling of potable water. These audits are often heavy, expensive and redundant. For more information see:

<http://www.iata.org/whatwedo/safety/audit/Pages/idqp.aspx> For application and information on how to join the IDQP please contact: IDQP@iata.org

7.16 FEEDBACK FROM PASSENGERS AND CREW

Cabin Crew are able to provide valuable feedback on their airline catering service. Should there be passenger or Crew comment regarding any item of food, Cabin Crew should be encouraged to complete a report providing details. In the event of a complaint involving a foreign object in a food item, or suspected food poisoning, Crew should retain samples of the suspect dish for analysis and hand over at the arrival station for investigation.

7.17 REPORTING OF SERVICE DELIVERY IRREGULARITIES

Cabin Crew are the airline management's link with the performance of the caterer and it is therefore essential that they report any discrepancies with respect to the delivery and quality of catering supplies. This will allow airlines to review problems with the caterer in order to avoid a recurrence.

Food should not be served if the Cabin Crew has any doubts in respect to the quality of the food (e.g. abnormal smell, texture etc.) A standard report should be available to Cabin Crew on board to report feedback to airline management.



REFERENCES

SAFETY

www.airsafe.com

Air Safe

www.flightsafety.org

Flight Safety Foundation (FSF)

www.isasi.org

International Society of Air Safety Investigators (ISASI)

<http://www.nts.gov/index.html>

National Transportation Safety Board (NTSB)

<http://www.skybrary.aero>

SKYbrary

<http://www.scsi-inc.com>

Southern California Safety Institute (SCSI)

REGULATORY

<http://www.casa.gov.au>

Civil Aviation Safety Authority (CASA)

<http://www.dot.gov/aviation>

US Department of Transportation (DOT)

<http://easa.europa.eu/home.php>

European Aviation Safety Agency (EASA)

www.faa.gov

Federal Aviation Administration (FAA)

www.icao.int and

www.icao.int/cabinsafety

International Civil Aviation Organization (ICAO)

www.tc.gc.ca

Transport Canada

<http://www.caa.co.uk>

UK Civil Aviation Authority

CATERING

www.IFCAnet.com

International Inflight Catering Association (IFCA)

HEALTH AND MEDICAL CARE

www.asma.org

Aerospace Medical Association (ASMA)

www.cdc.gov

The Centers for Disease Control and Prevention



www.cami.iccbi.gov

FAA Aeromedical Reports/CAMI

www.icao.int/icao/en/med/aviomed.htm

The Medical Department of the International Aviation Organization (ICAO)

www.who.int

World Health Organization (WHO)

www.who.int/csr/don/en

World Health Organization (WHO) – Disease Outbreak Site

www.who.int/ith

World Health Organization (WHO) – International Travel and Health Publication

www.wma.net

World Medical Association

LITHIUM BATTERY

<p>CASA</p>	<p>Portable Electronic Devices containing Lithium Metal or Lithium Ion Cells or Batteries: http://www.casa.gov.au/scripts/nc.dii?WCMS:STANDARD::pc=PC_100484</p> <p>Passengers warned of lithium battery safety risk: http://www.casa.gov.au/scripts/nc.dii?WCMS:STANDARD::pc=PC_100547</p> <p>Dangerous goods that may be carried by passengers and Crew: http://www.casa.gov.au/scripts/nc.dii?WCMS:STANDARD::pc=PC_90372</p> <p>Dangerous Goods Lithium poster: http://www.casa.gov.au/wcmswr/assets/main/dg/luggage/lithium_battery_poster.pdf</p>
<p>FAA</p>	<p>Safety Alert for Operators (SAFO) 09013 - Fighting Fires Caused By Lithium Type Batteries in Portable Electronic Devices: http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo/all_safos/media/2009/SAFO09013.pdf</p>



	<p>BATTERIES & BATTERY-POWERED DEVICES Aviation Incidents Involving Smoke, Fire, Extreme Heat or Explosion: http://www.faa.gov/about/office_org/headquarters_of_fices/ash/ash_programs/hazmat/aircarrier_info/media/Battery_incident_chart.pdf</p> <p>The following information expands upon SAFO 09013: http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo/all_safos/media/2009/SAFO09013SUP.pdf</p>
<p>IATA</p>	<p>http://www.iata.org/whatwedo/cargo/dgr/Pages/index.aspx</p> <p>http://www.iata.org/publications/tracker/may-2012/Pages/lithium-battery.aspx</p> <p>http://www.iata.org/training/subject-areas/Pages/cargo.aspx</p> <p>Guidance on Handling Dangerous Goods Incidents and Lithium Battery Fires in the Passenger Cabin: www.iata.org/cabin-safety</p>
<p>ICAO</p>	<p>International Civil Aviation Organization’s (ICAO) Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods (Doc 9481 AN/926): http://www.icao.int/safety/DangerousGoods/Working%20Group%20of%20the%20Whole%20on%20Lithium%20Batteries201/DGPWGLB.1.WP.015.en.pdf</p>
<p>SKYbrary</p>	<p>Lithium-Ion Aircraft Batteries as a Smoke/Fire Risk: http://www.skybrary.aero/index.php/Lithium-Ion_Aircraft_Batteries_as_a_Smoke/Fire_Risk?utm_source=SKYbrary&utm_campaign=747bfc81a5-SKYbrary_Highlight_07_02_2013&utm_medium=email</p>
<p>Transport Canada</p>	<p>Service Difficulty Alert - PROCEDURES FOR FIGHTING FIRES CAUSED BY LITHIUM TYPE BATTERIES IN PORTABLE ELECTRONIC DEVICES: http://www.tc.gc.ca/eng/civilaviation/certification/continuing-alert-2009-06-698.htm</p>

