ENHANCING SAFETY IN AEROMEDICAL TRANSPORT

Application Of An Airline

Standard Safety Management System

World War 1, 1918

Overview

The Regional Express Group Safety Management System (SMS) adopts a systematic approach to managing safety.

This systematic approach is applied in a way that focuses on operational safety, and the human element in the system to allow a holistic approach to managing safety and optimise learning outcomes.

Pel-Air Aviation and it’s aero-medical operation benefits from this Group approach.

ICAO/CASA Framework

Safety Management System Interfaces

Critical to the viability and health of an SMS it needs to begin with fostering and enabling a positive reporting culture where:

- The company policy is understood and reinforced
- Reporter receives feedback (individually and holistically)
- Reporters have confidence in the systems outcomes
- The target is Safety Improvement, and
- There is a culture of proactive reporting where this is encouraged and rewarded.

Pel-Air SMS Reports

Report Type	Select the type of report that best describes the event you wish to notify	(*Select relevant box*)
SAFETY EVENT	• Any occurrence involving airline personnel, facilities or equipment (including aircraft) where an abnormal situation, indication, failure, damage or injury has occurred. • Pel-Air FRMS/Pel-Air fatigue reports. • Rex fatigue reports • Passenger illness/injuries	○
GENERAL/HAZARD REPORT	• If you are reporting IT system issues, please go to http://it.rex.org.au and raise an IT ticket. • Any event or suggestion that does not pose a safety, security or OH&S threat to staff, passengers or others	○
WHS OCCURRENCE	• Any event in which an employee or contractor sustains illness and/or injury related to their employment or associated with their use of Company facilities, vehicles or equipment.	○
SECURITY OCCURRENCE	• Any event which is considered to constitute a breach of security measures in any element of airline operations (in-flight, aerodrome, terminal, hangar or office), including persons deemed unsuitable for flight.	○
For Flight Attendant Use Only		
TRIP REPORT	• This section is to be used by Flight Attendants to make comment on an in-flight or passenger situation that is not serious in nature eg delays, catering, cleanliness of cabin, customer service, dry cleaning vouchers, etc. Any incident, occurrence or suggestion that is safety, security or OH&S related must be submitted using one of the 4 sections above.	○
GENERAL FEEDBACK REPORT	• This report is to be used by Flight Attendants to give GENERAL FEEDBACK and communicate concerns on issues that are **not serious** in nature. EG; uniform issues.	○
For Engineering Use Only		
ENGINEERING IRREGULARITY	• Any occurrence where an abnormal item/assembly/situation is detected during aircraft or GSE engineering operations.	○
ENGINEERING MAJOR DEFECT	• Any reportable malfunction, failure or defect that occurs under the reportable categories of the Civil Aviation Regulations (Part 4B, CAR 1988) or any other malfunction, failure or defect in an aircraft that occurs or is detected at any time, if that malfunction, failure or defect if it is considered that the safe operation of the aircraft has been endangered or may have been	○
ENGINEERING SUSPECTED UNAPPROVED PARTS AND REJECTION OF AERONAUTICAL PRODUCT	• Relates to any equipment, component, fitting or installation which is reasonably suspected to be of questionable quality or for which unsatisfactory documentation exists. (Reference: CAR 1988).	○

Event Categories

Event Categories are used in the categorisation of internal reports.

Flight Management

Failure to Comply
- Instruction
- ATC Clearance
- NOTAM / Ops Notice
- Restricted Airspace
- Other

Crew Incapacitation
- Flight Crew
- Flight Attendant

Cabin Depressurisation

Alert / Emergency Declared
- PAN-PAN Call
- MAYDAY Call
- RERT/PERT

Missed Approach

Go-Around

Runway Incursion / Excursion

Operating Environment

Airport / ALA Environment Hazards
- Airport / Runway Closure
- Obstructed Runway
- FOD
- Gable Markers & Signage
- Surface Markings
- VASI / PAPI
- Runway Lighting / PAL
- Taxiway / Apron Lighting
- Runway / Taxiway Incursion
- Magnetic Interference
- Taxiway / Apron / Parking Surface Quality
- Runway Surface Quality
- Aircraft Parking
- Other

Navigation Facility Deficiency
- ILS
- NDB
- VOR
- DME
- Radar
- GPS/GNSS
- Other

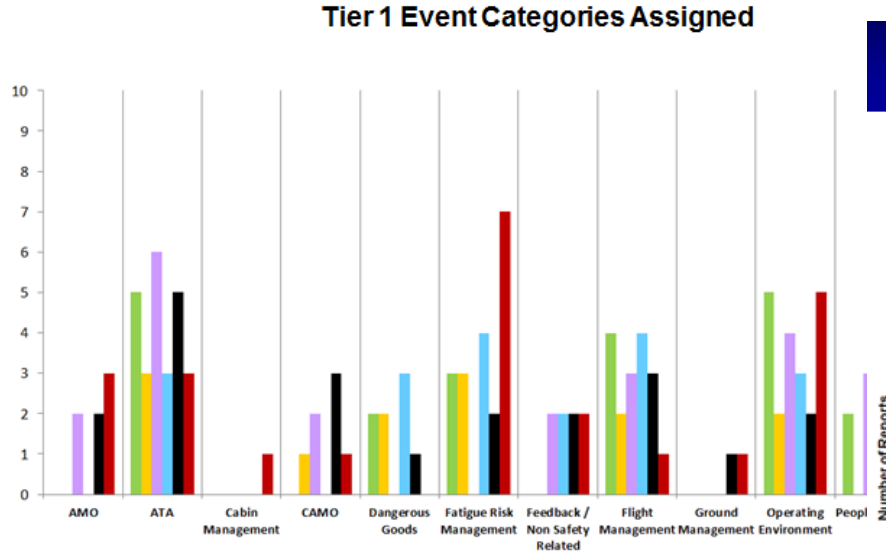
Ground Management

Aircraft Damage
- Sustained from GSE
- Sustained from FOD
- Sustained from Ground Vehicle
- Sustained from Building / Fixture / REX Facility
- Other

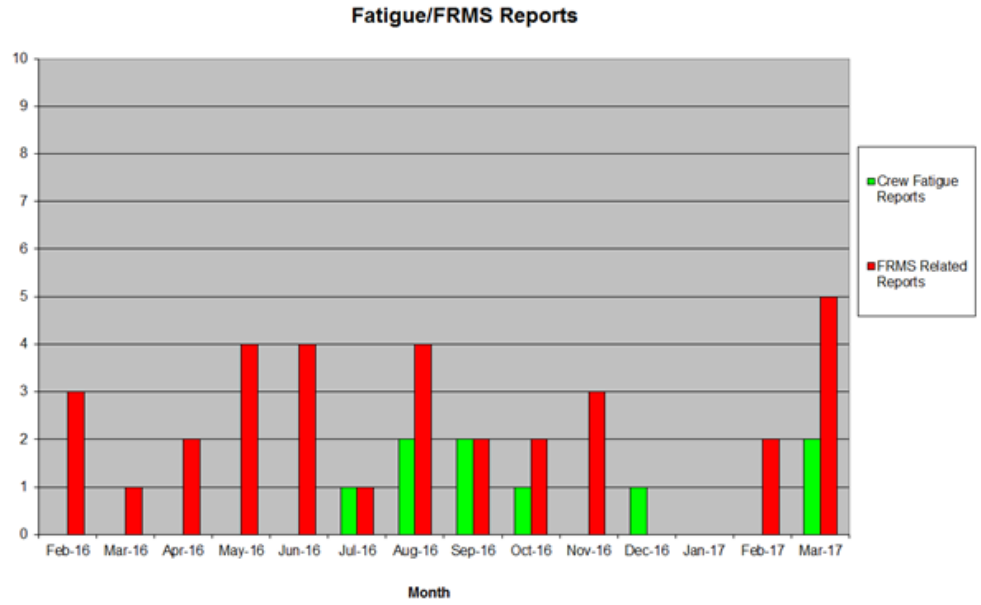
Ground Services Equipment
- Air-Conditioning Cart
- GPU
- Red Box
- DPL
- Battery Cart
- Toilet Cart
- Baggage Barrow / Caddy / Trailer
- Tug
- Polaris ATV's
- De-icing Equipment
- Refuelling Rig
- Tool / Stair / Ladder
- Chock / Cone
- Other

Some of the data presented includes:

Reports Assigned by Tier 1 Event Category



SMS Reports – Fatigue Risk Management



Safety Investigations

Safety Investigations

Pel-Air Safety Investigations are undertaken for the purposes of:

- ✈ Learning from occurrences
- ✈ Improving organisational defences
- ✈ Reducing operational risk and preventing recurrences

Safety Investigations

The fundamental principle of safety investigations is to

encourage

Investigators to look beyond the individual and

examine

the system and underlying reasons for their actions.

Investigator Training

All Pel-Air investigators in the SMS are trained and well versed on the investigation process.

The training provides structure, guidance and knowledge in areas such as:

- ✈ Corrective and preventative actions;
- ✈ Human factors considerations; and
- ✈ Causal factors etc.

Pel-Air Investigation

Bairnsdale

10th SEPTEMBER 2015

Bairnsdale – Background

- On the day, the patient had transported themselves to the airport at Bairnsdale. The patient at this time was not escorted by Ambulance Victoria staff.

- Bairnsdale Airport, a non-security controlled aerodrome, had unsecure/unlocked gates which allowed pedestrian access to the airside.

- The patient did access the airside, walking directly towards the operating propeller of our aircraft. It is estimated that the passenger came within 1.5 to 2m of the propeller arc.

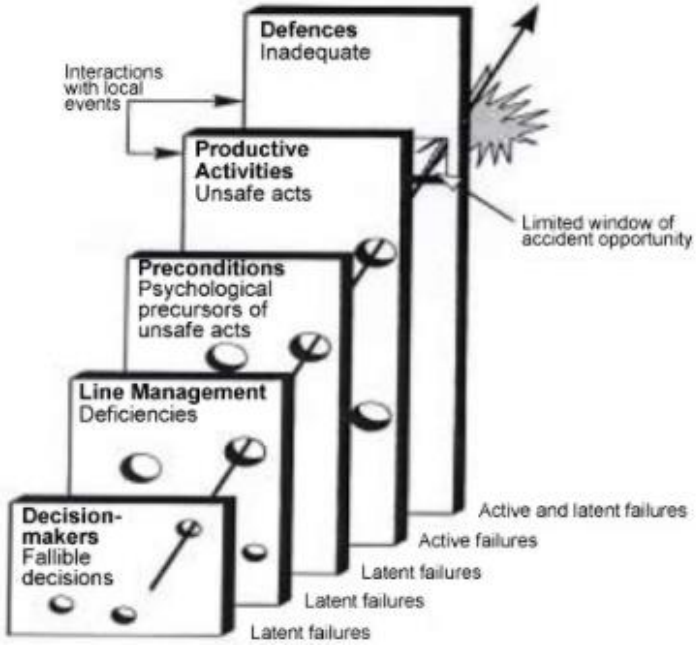
- The pilot took immediate action and conducted a non-standard engine shutdown.

Pel-Air Investigations – Corrective Action

- ✈Bulletins were issued for the AV Aerodrome Guide and AV ALA Guide,
- ✈Meetings were held with AV to discuss the preventative measures,
- ✈AV sent a letter to Bairnsdale and all councils,
- ✈Bairnsdale Airport removed all obstructing bushes from the sides of the pedestrian access path,
- ✈AV call script updated,
- ✈AV contacted the Regional and Local AV Management, to re-enforce the safety message to local ambulance crews.

Causal Factors

Causal factors or root cause analysis is the application of descriptors to identify the underlying (root) cause for which an occurrence has occurred.



FATIGUE RISK MANAGEMENT

Pel-Air FRMS

*Do you want to Report for the Pel-Air Fatigue Risk Management System?
MANDATORY FOR PEL-AIR FLIGHT CREW
Yes

Please select Type (*Multiple Selection*)
☐ 5th Consecutive Late Night Duty ☐ Fatigue Occurrence

What time of day did this occurrence take place? (*Single Selection*)
Select

What was your duty history (Pilot 1)?

	DUTY HOURS		BREAKS		FLYING HOURS
	ON	OFF	FROM	TO	TOTAL
Day of					
1 Before					
2 Before					
3 Before					

What was your duty history (Pilot 2)?

	DUTY HOURS		BREAKS		FLYING HOURS
	ON	OFF	FROM	TO	TOTAL
Day of					
1 Before					
2 Before					
3 Before					

What was your sleep history (Pilot 1)?

SLEEP PERIODS		NAPS		SLEEP QUALITY		
ON	OFF	FROM	TO	GOOD	OK	POOR

What was your sleep history (Pilot 2)?

SLEEP PERIODS		NAPS		SLEEP QUALITY		
ON	OFF	FROM	TO	GOOD	OK	POOR

How alert did you feel BEFORE this occurrence took place (Pilot1)?
(1= FULLY ALERT ... 7 = COMPLETELY EXHAUSTED) (*Single Selection*)
Select

How alert did you feel BEFORE this occurrence took place (Pilot2)?
(1= FULLY ALERT ... 7 = COMPLETELY EXHAUSTED) (*Single Selection*)
Select

How alert did you feel WHILE this occurrence took place (Pilot1)?
(1= FULLY ALERT ... 7 = COMPLETELY EXHAUSTED) (*Single Selection*)
Select

How alert did you feel WHILE this occurrence took place (Pilot2)?
(1= FULLY ALERT ... 7 = COMPLETELY EXHAUSTED) (*Single Selection*)
Select

How alert did you feel AFTER this occurrence took place (Pilot1)?
(1= FULLY ALERT ... 7 = COMPLETELY EXHAUSTED) (*Single Selection*)
Select

How alert did you feel AFTER this occurrence took place (Pilot2)?
(1= FULLY ALERT ... 7 = COMPL
Select

PERSONAL FATIGUE DETAILS: A

PERSONAL FATIGUE DETAILS: A

PERSONAL FATIGUE DETAILS: S
Select

PERSONAL FATIGUE DETAILS: S
Select

PERSONAL FATIGUE DETAILS: D
(Ex: 8.75 = 8:45)

PERSONAL FATIGUE DETAILS: D
(Ex: 8.75 = 8:45)

Please fill up PSWR and IFLS

Fatigue Assessment Form

1	Total hours of sleep in the 24 hours prior to sign-on?	
2	Total hours of sleep in the 24 hours prior to Question 1?	
	Total Hours of sleep in the 48 hours prior to sign-on	
3	How many hours since you woke-up from your last sleep prior to sign-on?	
4	How many hours until the end of your duty (or extended duty)?	
	Total waking hours to the end of the duty (or extended duty)?	
5	How many hours of extra sleep since your sign-on?	
	Total hours sleep in the last 48 hours (including extra sleep periods)	
	Is there an Increased Risk of Fatigue (PSWR)?	
	Individual Fatigue Likelihood Score (IFLS)	0

Fatigue Risk Management System (FRMS)

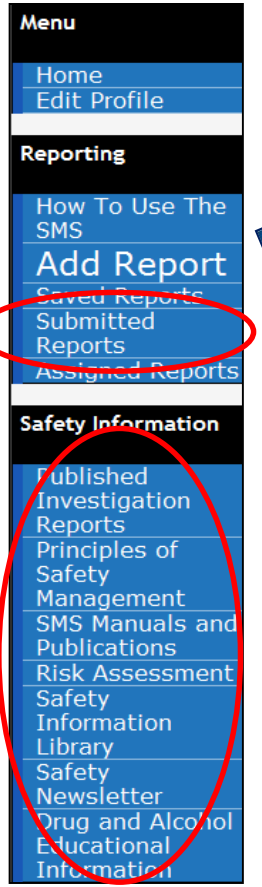
Management obligation.

Scheduling practises.

Personal strategies.

Technology design.

Safety Promotion and Education



SMS – Future Challenges

- ✈The advance and changing climate of Social Media
- ✈Changing regulations
- ✈Moving more towards a Risk Based and Data Led approach
- ✈Operational Expansion
- ✈Bringing everyone along for the ride

ANY QUESTIONS