EURAMI Fixed Wing Air Ambulance Standards Version 6.0.

September 23rd, 2022

1. Business Organization & Ethics

The aeromedical service is fully dedicated to a culture of customer and patient centricity, reflected in the following sections.

1.1. Business ethos

1.1.1. The aeromedical service has a written mission statement, clearly and concisely defining its purpose, corporate strategy and core values

1.1.2. The aeromedical service has a written code of ethical conduct that demonstrates ethical practices in business and marketing. The code is to include:

1.1.2.1. Letter from the CEO, values, a explanation of stakeholders (staff, contractors, customers, vendors, others), expected behaviours, unacceptable and prohibited behaviours, sanctions for violations of code

1.1.3. The aeromedical service is properly directed and staffed according to the mission statement, anticipated individual needs, and scope of services offered

1.1.4. The aeromedical service operates an accredited management system relevant to aviation

1.2. Legal compliance

1.2.1. The aeromedical service demonstrates compliance with the legal requirements and regulations of the government, aviation regulatory body and local agencies under whose authority it operates

1.2.2. The aeromedical service complies with confidentiality and data protection laws in the areas in which it offers service cover

1.2.3. The service ensures that its employees and those subcontracted to work on the behalf of the service shall maintain due confidentiality in respect of all third parties

1.3. Processes

1.3.1. The aeromedical service has a written due diligence process and conducts desktop audits of their regular external providers of patient transport (e.g ground and air ambulances, handling agents)

1.3.2. The aeromedical service has an Emergency Response Plan (ERP)

1.3.3. The aeromedical service has a Business Continuity Plan (BCP)

1.3.4. The aeromedical service has established technical and organisational measures (TOMs) based upon their processes to ensure data security within the confines of their legislation

1.3.5. The aeromedical service has clear rules for subcontracting to / chartering from other air ambulance providers to ensure transparency for its customers. This does not include Wing 2 Wing missions

1.3.6. The air ambulance service has established an informed consent process, including:

1.3.6.1. Transparent pricing which can be understood by a layperson

1.3.6.2. Indicates if a 3rd party has to pay all or a portion of the costs

1.3.6.3. If the patient / family is responsible for the full costs of transport

1.3.6.4. Confirmation of cover is obtained where costs are to be paid by an insurance provider

1.3.6.5. If the service is rendered by a third party

1.4. Financial requirements

1.4.1. The aeromedical service must declare its source(s) of funding and provide evidence of financial security. A statement from an external accountant/ auditor is sufficient

1.4.2. The service must provide a description of the way the service is funded, supported by evidence from audited accounts or comparable

1.4.3. A sheet from an external accountant or auditing company for the last three years of operation is needed prior to the audit

1.4.4. If the service has been in operation for less than three years, the EURAMI board will take a joint decision on whether the provider can be accredited

1.4.5. Independent auditors must report on the business financials at the intervals required under corporation law in the service's base country. A statement from the accountant is sufficient

1.5. Insurance

1.5.1. The aeromedical service shall hold an appropriate level of insurance cover (according to the scale of the scope of its business) in the following areas:

1.5.1.1. Third party liability indemnity cover for each aircraft with limits set by the relevant aviation regulatory body

1.5.1.2. Malpractice indemnity cover for health care professionals with an appropriate level of insurance in their country a min. 3 million USD in the aggregate

1.5.1.3. Health insurance, including injury and accident cover with death in service benefits

1.5.1.4. Loss or damage of essential assets - aircraft and other aviation assets

1.5.1.5. Loss or damage of essential assets - medical equipment

1.6. Human capital and resources

1.6.1. There is a clear indication that service personnel are the most important factor for success, in that their motivation, education and training contribute decisively to meet high-level quality standards

1.6.2. There shall be evidence that staff are valued and recognised for their contributions to the success of the service

1.6.3. Staff shall receive feedback and appraisals at regular intervals

1.6.4. Service shall demonstrate a consistent means of keeping staff up to date on HR issues, business policy and other management issues associated with their roles within the service

1.6.5. There are clear functional and professional reporting lines

1.6.6. There is a clear disciplinary process, designed to protect patients, employees and the business

1.6.7. Staff members should be able to freely discuss concerns about the service, management and other related issues

1.7. Leadership and Decision Making

1.7.1. There shall be a well-defined scope and limits of decision making for all employees

1.7.2. An accurate and contemporaneous organisational chart defines how the aeromedical transport service fits into the wider business / organisation

1.7.3. The aeromedical service should at least three discrete departments, including:

1.7.3.1. Aviation (which may include Flight Operations, Safety and Compliance, Engineering and Aircrew)

1.7.3.2. Medical (which will include Medical Operations, Clinical Services and Medical Support)

1.7.3.3. Commercial (including Sales, Marketing and Business Development)

1.7.4. Evidence shall demonstrate that management encourages ongoing communication between aircrew, flight medical crew, operations/communications personnel, engineers and other personnel

1.7.5. Evidence shall demonstrate that information regarding medical, logistic, safety and management issues are effectively communicated to staff (e.g. regular meetings, emails, newsletters etc)

1.8. Marketing

1.8.1. The aeromedical service must use ethical and transparent marketing to ensure that potential clients and end users of the service are informed of:

1.8.1.1. Capabilities of the aeromedical service

1.8.1.2. Type and scope of patients carried by the aeromedical service (defined by age, level of care and any specialist needs)

1.8.1.3. Type of aircraft used and their registration numbers

1.8.1.4. If the provider uses any third party providers (e.g. ground ambulances, third party aircraft etc)

1.8.1.5. Hours of operation, phone number, and access procedure

1.8.2. Social media advertising shall be frequently scrutinised to ensure that no lapse of confidentiality or inappropriate entries appear online

1.8.3. Employees are given training on the ethical and responsible use of social media

1.8.4. The senior management shall set guidelines for press related issues and marketing activities

1.9. Environmental

1.9.1. The aeromedical service demonstrates an awareness and focus on improving long-term environmental impact and sustainability through:

1.9.1.1. Evidence of a review of its current environmental impact across all operations (not more than 12 months old)

1.9.1.2. Plans to minimise its CO2 emissions in the longer-term

1.9.1.3. Policies to ensure recycling within its operations

1.9.1.4. Evidence of focus on reducing environmental impact wihtin its facilities and ground operations

1.10 Brokering (Brokering refers to missions that are conducted by a third party but operated commercially by the Provider and its brand (the subject of this audit)

1.10.1.Where arrangments like this exist, they should be clear and transparent to all parties, including the end client and EURAMI

1.10.2 When a third party is selected, every effort should be made to select a EURAMI-accredited provider when geographically feasible. When not using a EURAMI-accredited provider, the selection of the third party should be justified in writing and provided to EURAMI as evidence during the audit

1.10.3. There should be written consent / approval from the client to use the third party prior to mission dispatch

1.10.4. Brokering of missions to third parties should be limited to no more than 10% of the Provider's annual activity. (excluding Wing to Wing Missions - see next section)

1.10.5. The Provider maintains overall responsbility for the safety and quality of missions conducted by third parties

1.10.6. Missions that use third parties should have clear lines of reporting and accountability

1.10.7. Clinical and aviation personnel experience and expertise on the mission should be equal to or above the level of the Providers own personnel

1.10.8. The quality of aviation and medical equipment / assets should be equivalent to or exceeding those in use by the Provider

1.10.9. Lines of communication (including in-mission clinical advice) between the Provider and third party should be clearly defined and unambiguous

1.10.10. Third party missions should have at least the same level of insurances (both medical and aviation) as missions operated by the Provider alone

1.11. Wing to Wing Missions (Refers to missions of greater than 1 leg, where an external third party provider flies one or more of the mission legs in addition to the primary provider)

1.11.1.Where arrangments like this exist, they should be clear and transparent to all parties, including the end client and EURAMI

1.11.2 When a third party wing to wing partner is selected, every effort should be made to select a EURAMI-accredited provider when geographically feasible. When not using a EURAMI-accredited provider, the selection of the third party should be justified in writing and provided to EURAMI as evidence during the audit

1.11.3. There should be written consent / approval from the client to use the third party prior to mission dispatch

1.11.4. The Provider maintains overall responsbility for the safety and quality of the entire mission

1.11.5. Wing to wing missions should have clear lines of reporting and accountability

1.11.6. Clinical and aviation personnel experience and expertise of the wing to wing partner should be equal to or above the level of the Providers own personnel

1.11.7. The quality of aviation and medical equipment / assets used by the wing to wing partner should be equivalent to or exceeding those in use by the Provider

1.11.8. Lines of communication (including in-mission clinical advice) between the Provider and wing to wing partner should be clearly defined and unambiguous

1.11.9. Wing to wing missions should have at least the same level of insurances (both medical and aviation) as missions operated by the Provider alone

2. Safety and Quality Management

2.1. Quality control

2.1.1 The aeromedical service has a clearly defined governance system and shall demonstrate methods used to develop and maintain high standards

2.1.2 There shall be formal, periodic department and interdepartmental meetings for which minutes are kept

2.1.3 The aeromedical service has a quality manager who oversees all aspects of quality assessment and control across the complete range of services provided by the organisation

2.1.4. The aeromedical service has a quality management committee that meets on a regular basis

2.1.5. There is a clear trail of accountability for quality management in all areas of the service

2.1.6. The aeromedical service has a written policy defining the quality management system and its processes

2.1.7. The quality policy is understood and followed at all levels and by all staff and each employee and/or subcontractor works towards measurable objectives

2.1.8. The aeromedical service has defined key performance indicators (KPIs) and quality targets (QTs)

2.1.9. Medical KPIs and QTs are based on clinical 'best-evidence' whenever possible, including international, national or local patient care guidelines or protocols, and supported by the service's own policies

2.1.10. Mission KPIs and QTs are based on written logistics and operations guidelines, policies or protocols written by the Aeromedical Service according to its mission statement, scope of service and capabilities

2.1.11. Aviation KPIs and QTs are based on international and national regulations from the aviation regulatory body or bodies that have jurisdiction in the service's operating area

2.1.12. The aeromedical service produces regular quality control reports (at least annually)

2.1.13. The aeromedical service has a continuous quality management monitor that allows identification of deviations from the defined KPIs and QTs in real time

2.1.14. If the aeromedical service operates its own aircraft; the service must declare which of its fleet are dedicated air ambulances

2.2. Quality audit processes

2.2.1. The aeromedical service has quality management tools designed to collect, monitor and assess the activities and performance of the service continuously

2.2.2. KPIs and QTs are designed to monitor patient care, operational efficiency, aviation safety, and financial control

2.2.3. KPIs and QTs are reviewed regularly (at least every 2 years)

2.2.4. The quality system is regularly audited and evaluated for conformance and effectiveness

2.2.5. Failure to meet KPIs and/or non-compliance to QTs are identified and highlighted by the Quality Manager or Quality Committee and corrective issues are addressed in a written action plan

2.2.6. Action plans are audited, evaluated to ensure corrective action is being achieved, and re-evaluated for further action if KPIs and/or QTs are still not being met

2.2.7. All action plans are reviewed on a regular basis and feedback is sent to relevant staff and management until the action plan is closed by the Quality Manager

2.3. Quality audit processes review

2.3.1. The quality management meetings include representation from each of the relevant departments within the service (such as aviation, operations, and medical departments)

2.3.2. The periodic quality control reports are reviewed at senior management meetings

2.3.3. Internal documents that form the basis for KPIs and QTs, such as patient care guidelines, policies, and protocols must be reviewed annually for currency, accuracy and appropriateness of the content

2.4. Data used for quality control

2.4.1. The aeromedical service makes decisions about quality based on recorded data

2.4.2. The aeromedical service shall record the following quantitative (qn) and qualitative (ql) items:

2.4.2.1 Number and types of missions

2.4.2.2 Aborted missions with reasons

2.4.2.3 Diversions with reasons

2.4.2.4 Medical crew composition

2.4.2.5 Ventilated/ Critical Care flights

2.4.2.6 Portable Isolation Unit flights

2.4.2.7 Patient diagnosis categories (for example ICD-10 disease categories)

2.4.2.8 Adverse medical events

2.4.2.9 Complaints

2.4.2.10 Patient/client satisfaction ratings

2.4.2.11 Aviation incidents

2.5. Safety management

2.5.1. Safety management system:

2.5.1.1. The aeromedical service has a safety manager who oversees all aspects of aviation related safety issues across the complete range of services provided by the organisation

2.5.1.2. The aeromedical service follows the generic recommendations of ICAO (International Civil Aviation Organization) Annex (19) on Safety Management and the ICAO Safety Management Manual

2.5.1.3. The service operates its safety management system (SMS) in conformance to the regulations promulgated by the aviation regulatory body which has jurisdiction in the area(s) of the service's operations

2.5.1.4. The aeromedical service has adopted a culture of safety that is recognised and followed by its staff

2.5.1.5. The aeromedical service has a safety committee that meets on a regular basis

2.5.1.6. There is a clear trail of accountability for safety management in all areas of the service

2.5.1.7. The aeromedical service has a written policy defining the SMS and its processes

2.5.1.8. The SMS policy shall:

2.5.1.8.1. Show clear evidence of adherence to the "Just Culture", namely that individuals are not blamed or punished for 'honest errors', but are held accountable for wilful violations and gross negligence

2.5.1.8.2. Define how the service is set up to manage risk

2.5.1.8.3. Describe a safety reporting system

2.5.1.8.4. Allow identification of risk

2.5.1.8.5. Support the implementation of suitable controls

2.5.1.8.6. Provide a process to identify and correct non-conformities

2.5.1.8.7. Define a continual improvement process

2.5.1.9. The safety management system is understood and followed at all levels and by all staff and/or subcontractors

2.5.1.10. The service has a safety management system (SMS) that provides a systematic way to identify hazards and control risks while maintaining assurance that these risk controls are effective

2.5.2. Safety committee

2.5.2.1. The safety committee must comprise of at least one representative from each of the arms of the service (aviation, operations and medical)

2.5.2.2. The committee shall meet regularly to discuss risks, actual occurrences and actions following previous reports

2.5.2.3. Committee meetings shall be held at least monthly

2.5.2.4. Written reports on the activities of, and decisions made by, the safety committee shall be submitted to senior management meetings

2.5.2.5. Recommendations for amendments to operational and safety issues must be reviewed by senior management

2.5.3. Safety reporting

2.5.3.1. The aeromedical service encourages all staff to complete safety deficiency reports on any occasion that a hazard or potential hazard is encountered

2.5.3.2. The reporting system shall not be confined only to aviation events

2.5.3.3. Safety reports are dispatched to the Safety Manager (or nominated deputy) as soon as possible after the occurrence/incident so that remedial action can be expedited

2.5.3.4. All safety reports are discussed at safety committee meetings

2.5.3.5. The Safety Manager has authority to escalate safety reports to senior management at any time

2.5.3.6. Every safety report is followed by an action plan (e.g. a root cause analysis and corresponding action plan)

2.5.3.7. All action plans are reviewed on a regular basis and feedback is sent to relevant staff and management until the action plan is closed by the Safety Manager or senior management

2.5.4 Post Incident Plan

2.5.4.1 The Aeromedical Service must have a detailed, readily accessible post incident plan as part of the flight following policy so that appropriate search and rescue efforts are initiated in the event that an aircraft is overdue or radio communications cannot be established or verified

2.5.4.2. The plan shall include:

2.5.4.1.1 List of personnel/telephone numbers to notify as well as their priority to activate in the event of an accident or incident

2.5.4.1.2 Guidelines to follow in attempts to communicate with the aircraft

2.5.4.1.3 Guidelines to initiate search and rescue

2.5.4.1.4 Time frame to activate the post-incident plan for overdue aircraft

2.5.4.1.5 Communications policies to ensure accurate information dissemination

2.5.4.1.6 Procedures to secure all documents, and recordings related to the particular incident

2.5.4.1.7 Procedure to deal with releasing information to the press

2.5.4.3. An annual exercise is conducted to test the post incident plan. This exercise should involve Flight Crews, flight medical crew, operations personnel, ground staff and management staff

2.6. Risk management

2.6.1. The SMS is linked with risk control/management, so that concerns raised through the risk management process can be followed up through the continuous quality control program

2.6.2. The aeromedical service operates a risk control process that:

2.6.2.1. Allows identification of hazards and risks

2.6.2.2. Assesses the worst case impact of individual hazard, should they occur

2.6.2.3. Assigns a likelihood of each risk actually occurring

2.6.2.4. Proposes risk management strategies designed to eliminate, ameliorate or mitigate either the hazard itself, or the consequences of the hazard

2.6.3 Staff members shall have a designated manager with whom they can discuss concerns about the service, its procedures, safety, or any other issue, without fear of detriment or retaliation

3. Operations

3.1. Organizational Structure

3.1.1. The logistics and handling of aircraft, aircrew, engineering, medical crew, and all the support needed to successfully complete an air ambulance transport are managed by an Operations Department

3.1.2. An Operations Manager shall be employed to control and manage the daily activities of the Operations Department(s)

3.1.3. There shall be adequate personnel to provide full coverage of all Operations activities using a staff rota that enables 24 hour cover all year round

3.1.2 Medical Control and Compliance

3.1.2.1. The Medical Director's role needs to be clearly defined in writing with regards to training, personnel recruitment, operations, compliance and auditing (e.g. on a job description)

3.1.2.2. The Medical Director (or named deputy) has active involvement in mission planning, mission conduct and mission debrief

3.1.3. Escalation Policy

3.1.3.1. There is an escalation policy for deviations that may occur during an air ambulance mission, whether medical or aviation, that defines the lines of communication, authority and actions

3.1.4. Qualifications Requirements

3.1.4.1. The Operations Manager has to have a qualification and/or experience in or related to operations management

3.1.4.2. Shall have a full command of the official languages of the country in which the aeromedical service is based, as well as of English if the service is not based in an English-speaking nation

3.1.5. Duties of Operations Personnel

3.1.5.1. Coordinate communications and organization internally and externally in all aspects related to the safe and efficient undertaking of an aeromedical transport mission

3.1.5.2. Receive calls from clients and commissioners of air ambulance transfers

3.1.5.3. Issue quotes and/or estimates for missions when requested by outside agencies

3.1.5.4. Receive and co-ordinate requests for aeromedical transports

3.1.5.5. Send and receive patient medical reports

3.1.5.6. Assign flight crew according to rotas which conform with national regulations

3.1.5.7. Set up logistic stages of each sector in the mission plan

3.1.5.8. File and/or change flight plans

3.1.5.9. Access medical crew and flight crew visas and passport information in order to complete flight manifest documentation

3.1.5.10. Track mission progress (flight following)

3.1.5.11. Communicate with air traffic services

3.1.5.12. Communicate with aircraft on-mission

3.1.6. Operations Personnel - Company Orientation

3.1.6.1. There is an induction and training programme for operations personnel

3.1.6.2. The induction programme should include orientation in the following areas:

3.1.6.2.1. Company Briefing

3.1.6.2.2. Department and Reporting Structure

3.1.6.2.3. All areas of Operations duties

3.1.6.2.4. Communication tools and policies

3.1.6.2.5. Aspects of relevant company financial controls and policies

3.1.6.3. Proof of induction / orientation should be documented (eg via a checklist kept in the staff record)

3.1.7. Operations Personnel Training

3.1.7.1. Training of Operations Personnel shall include:

3.1.7.1.1. Use of the service's case management IT system.

3.1.7.1.2. Financial aspects of quoting and estimating missions

3.1.7.1.3. National and international aviation regulations

3.1.7.1.4. Geographical limits and other considerations applicable to the aeromedical service

3.1.7.1.5. Border control regulations (immigration and customs)

3.1.7.1.6. Company Operations Manual

3.1.7.1.7. Company safety regulations and emergency procedures

3.1.7.1.8. Dangerous Air Cargo (DAG) regulations and procedures

3.1.7.1.9. Safety Management System (SMS)

3.1.7.1.10. Human factors (crew resource management)

3.1.7.1.11. Flight manifest documentation

3.1.7.1.12. Mission logistics planning

3.1.7.1.13. Aircrew flight time limitations

3.1.7.1.14. Filing flight plans

3.1.7.1.15. Flight following (tracking) procedures

3.1.7.1.16. Radio Telephony (RT) procedures

3.1.7.1.17. Major incident co-ordination

3.1.7.1.18. Ground handling of aircraft

3.1.7.1.19. The capabilities and resources of airports, ground ambulance suppliers, receiving hospitals and other facilities that are needed for a successful mission outcome

3.1.7.2. An end-of-training evaluation completes the training and is documented for each member of Operations Personnel

3.2. Operational Data and Security

3.2.1. Data Compliance and Confidentiality

3.2.1.1. The aeromedical service demonstrates that the security of the data collected meets the high standards required for national data protection/confidentiality laws

3.2.1.2. The aeromedical service demonstrates that the data is accurate and complete

3.2.1.3. The aeromedical service provides evidence that these data are used to improve the quality, safety, efficacy and efficiency of the service

3.2.1.4. The aeromedical service provides evidence that the findings and conclusions of audited data are distributed to:

3.2.1.4.1. Key players within the service's own operations.

3.2.1.4.2. Open-access or external publication for the benefits of the wider aeromedical industry

3.2.1.5. Staff take steps to minimise noise and other distractions when an open-plan environment is used for operational communications

3.2.2. Alarm/ Call Centre

3.2.2.1. The alarm/ call centre is avialable and accessible at all time during missions

3.2.2.2. There is at least one dedicated phone line for aeromedical transport co-ordination

3.2.2.3. There is at least one dedicated alternative phone line for aeromedical transport communications

3.2.2.4. There is at least one dedicated email address for aeromedical transport communications

3.2.3. Call Management

3.2.3.1. Incoming and outgoing phone calls are recorded

3.2.3.2. Parties are informed if their conversation are recorded as per national laws

3.2.3.3. Recordings are time stamped and may be played back directly by communications personnel

3.2.4. Online Portal / Database

3.2.4.1. There is an electronic case management software tool. This tool shall be used to gather medical, logistics, and aviation data centrally

3.2.5. Back-Up Power

3.2.5.1. In the case of loss of mains power to the IT and communication equipment there is a back-up emergency power source for communications equipment

3.2.5.2. In the event of a power outage, there is a policy and alternative means of communication

3.2.6. Daily Status Board

3.2.6.1. There are real or virtual status board(s) easily accessible to the aviation and medical operations teams. Information may include:

3.2.6.1.1. Booked flights

3.2.6.1.2. Current flights (missions in progress)

3.2.6.1.3. Aircrew on duty and standby (availability)

3.2.6.1.4. Flight medical crew on duty and standby (availability)

3.2.6.1.5. Aircraft availability
3.2.6.1.6. Maintenance status of aircraft
3.2.6.1.7. Weather information

3.2.6.2. The status board is regularly updated and is part of the handover process at shift changes

3.2.7. Internal and External Communications

3.2.7.1. There is an internal communication policy or a set of procedures

3.2.7.2. The policy has to highlight the exclusive use of the online communication platforms established for flight operations (i.e.WhatsApp, e-mail, social media) for business purposes only, no personal use

3.2.7.3. A policy should outline customer relations with regards to customer complaints, feedback, follow up and documentation

3.3. Aircraft Access and Utilisation

3.3.1. Contract

3.3.1.1. Where the service does not own but leases its aircraft, a contract has to be in place that covers the availability of specific aircraft with agreed interior configuration, including stretchers and other air ambulance related equipment

3.3.2. Audit

3.3.2.1. Aircraft documents, current and approved by the civil aviation authorities, including Air Operator Certificate, Operations Specifications, Airworthiness Certificate, Insurance policies, have to be available to the Operations Manager and team and regularly updated

3.3.2.2. Through a defined process, expiration dates of aircraft, pilot training, insurance documents and maintenance of own or third party aircraft are flagged up, reviewed and communicated to all relevant parties

3.3.2. Crew Requirements

3.3.2.1. A defined process ensures that professional licences, medical certificates and travel documents as required by the air ambulance crew, are current

3.3.2.2. All crew has a company Crew ID card with photograph and an expiration date

3.3.3. Operational Capabilities

3.3.3.1. Quality and Safety Management Systems have to be in place

3.3.3.2. Flight and duty time limitations and crew rest are in accordance with the respective aviation regulations and company safety policies

3.3.3.3. Information on airport limitations (Cat-C airports/ airport lists) are available to the operations team for planning purposes and to arrange for special procedures where necessary

3.3.4. Medical Capabilities

3.3.4.1. The service clearly communicates its medical capabilities and limitations to potential clients and external customers/ agencies

3.3.4.2. SOPs and procedures for the transport of patients with special requirements such as obesity or patients needing a portable medical isolation unit are documented and available to the Operations Team

3.3.5. Medical Equipment and Drugs

3.3.5.1. SOPs are in place for the storage and attachment of medical equipment and drugs on board the aircraft

3.3.5.2. SOPs are in place for the safe storage of medical equipment and drugs in the office

3.3.6. Geographical Limitations of Operation

3.3.6.1. A policy should define geographical limitations in regards to operational capability

3.3.6.2. A policy should define geographical limitations in regards to aviation operations and security (war risk)

3.3.7. Wing to Wing Operations and Control

3.3.7.1. For frequent wing to wing flights/ destinations, the service should have contracts in place with respective wing to wing partners.

3.3.8. Airside/ Tarmac Transfers

3.3.8.1. There is a policy for conducting 'tarmac transfers' where applicable

3.4. Receiving Mission Requests

3.4.1. All requests should be answered within a timeframe according to quality targets set by the company

3.4.2. All requests are to be documented for quality and audit purposes

3.5. Quoting

3.5.1. Quotation should be provided in writing and sent electronically

3.5.2. Any additional surcharges are clearly stated in the quote

3.5.3. The following items are to be specified in the quotation:

3.5.3.1. Availability

3.5.3.2. Activation time

3.5.3.3. Pre-position requirements

3.5.3.4. Bed-to-bed capability for both ends of the mission

3.6. Mission Approval

3.6.1. Financial Approval

3.6.1.1. Financial confirmation must be obtained in writing including cost changes that may arise

3.6.2. Medical Clearance

3.6.2.1. Lines of authority for the medical approval of the mission are clearly defined by the Medical Director

3.7. Mission Planning

3.7.1. Mission Scheduling

3.7.1.1. Availability and timelines for the mission are transparently communicated as part of the mission planning

3.7.2. Maps and navigation

3.7.2.1. Maps and navigation charts for the entire area(s) of operation are readily available

3.7.3. Flight planning hardware and software

3.7.3.1. Flight planning hardware and software must be updated on a continuous basis, so that all charts, maps, documents, and references are always current

3.7.3.2. A quiet area with computer access and flight planning documents is available for aircrew to plan and prepare for flights

3.7.3.3. A daily briefing facility allows constant updating of NOTAMS, Danger Areas, Weather and any other such information that may be necessary in order to conduct a flight safely

3.7.4. Logistical Arrangmements

3.7.4.1. The following arrangements necessary to perform an air medical service should include but not be limited to:

3.7.4.1.1. Jet fuel arrangement

3.7.4.1.2. Ground handling arrangement

3.7.4.1.3. Ground ambulance

3.7.4.1.4. Hotel accommodation

3.7.4.1.5. Confirmation of Visa arrangement for the patient and relatives

3.7.5. Mission Announcement

3.7.5.1. There should be a notification to all relevant parties when a mission has been confirmed

3.8. Mission Monitoring and Communication

3.8.1. There is a policy that outlines communication and notification to respective parties during the mission

3.8.2. A mission cancellation policy should define terms and conditions around the cancellation of a mission (reasons, costs, communication, documentation)

3.8.3. A policy for unforeseen events during a mission with a patient on board should outline the communication and management of such events (i.e. weather related aircraft diversion, aircraft grounded for technical reasons or patient death inflight)

3.9. Post Mission Activities

3.9.1. Post Mission Activities should include debrief, cleaning and restocking of equipment and drugs, disinfection of aircraft and equipment

3.10. Emergency Response Plan

3.10.1. The service must have an Emergency Response Plan that describes the communication and actions needed to be taken in a crisis (i.e. natural disaster, war or terrorism related)

4. Medical

4.1. Medical Department - Overview

4.1.1. The service has a dedicated and integrated Medical Department. The organisation of the Department is well-defined and understood by all staff

4.1.2. It is clear and unambiguous how the Medical Department fits within the overall company structure, including key lines of accountability (shown on a company organisation chart)

4.1.3. The Medical Director has overall responsibilty for patient care decisions and works together with the Service's Executive Management on other organisational matters

4.1.4. Patient care and wellbeing should always be the primary concern of the organisation and should not be compromised for operational or commercial reasons, as reflected in the mission statement

4.1.5. All medical personnel shall understand the Medical Department chain of command, including reporting structure and and who to contact for help

4.1.6. There should be a 'top cover' structure of senior medical support available for medical crew advice on missions at all times, this should be immediately available and outlined in a policy document

4.1.7. Flight Medical Crew shall have immediate access to the Medical Director / Chief Medical Officer or covering medical officer for any questions or concerns that arise on a mission

4.2. Scope of Medical Service

4.2.1. The air ambulance service has a well-defined scope of the service that is known and understood by all staff

4.2.2. All aircraft to be accredited are configured with stretcher systems, medical gases and medical equipment appropriate to the level of care provided

4.2.3. Missions are appropriately staffed and resourced according to the defined level of patient care (including Flight Medical Crew, medical equipment and consumables)

4.2.4. The air ambulance service has documented criteria regarding appropriate levels of care required by patients using the service. This shall include:

4.2.4.1. A description of the levels of care / patient groups that can be transported

4.2.4.2. Associated types and numbers of health care professionals that are required for each level of care

4.2.4.3. The minimum equipment set(s) that must be carried for each level of care

4.3. Medical Department - Key Post-Holders

4.3.1. The Medical Department employs appropriately qualified and experienced personnel in key organisational roles. Job titles may differ, but the roles should broadly cover the following:

4.3.1.1. Medical Director (may be called ‘Chief Medical Officer’, ‘Senior Flight Physician’ or such other term as is preferred by the air ambulance service).

4.3.1.2. Clinical Services Manager(s), which may be (as approriate to the service provided):

4.3.1.3. Flight Nurse Manager (may be called Senior Flight Nurse, Chief Nurse, etc.)

4.3.1.4. Flight Paramedic Manager (may be called Senior Flight Paramedic, Chief Paramedic, etc.)

4.3.1.5. Flight Nurse Co-ordinator(s) (may be called Flight Nurse Ops, Office Flight Nurse, etc.)

4.3.1.6. Flight Medical Operations Co-ordinator(s). (may be called Medical Ops Manager, etc)

4.3.1.7. Medical Training Manager and Induction Course / CPD Faculty

4.3.2. The Medical Department employs appropriately qualified and experienced personnel in the following flying roles (as appropriate to the service provided):

4.3.2.1. Flight Doctors

4.3.2.2. Flight Nurses

4.3.2.3. Flight Paramedics

4.3.1.4. Flight Respiratory Therapists

4.3.1.5. Other non-physician healthcare professionals / Associated Healthcare Professionals (AHP's - e.g. midwives and physiotherapists)

4.3.1.6. Expert medical personnel key to any specialist aspects of the air ambulance service (e.g. neonatal care, psychiatric care, ECMO etc)

4.3.3. Medical Director (MD) / Chief Medical Officer (CMO)

4.3.3.1. The service employs a Medical Director (may be called ‘Chief Medical Officer’ or other) who is available for consultation within normal day-time working hours.

4.3.3.2. Where a Medical Director works part-time, one or more nominated deputies may share the on-call rota provided overall medical repsonsibility remains clear

4.3.3.3. The Medical Director or a Medical Officer with full delegated authority, is available 24/7/365 to deal with urgent clinical mission-related decisions.

4.3.3.4. The Medical Director establishes and maintains a standard of high quality medical care provided by the Flight Medical Crew

4.3.3.5. The Service must provide a Resume / CV of the Medical Director with supporting documentation, demonstrating:

4.3.3.5.1. A full and unrestricted license to practice medicine from the country in which the air ambulance service is based

4.3.3.5.2. Five or more years of clinical experience, and qualifications in a relavent specialty (e.g. Intensive Care Medicine, Anaesthesia, Emergency Medicine)

4.3.3.5.3. A minimum of 2 years’ experience in a critical care environment.

4.3.3.5.4. Maintainenance of clinical currency in an acute medical role on at least a monthly basis

4.3.3.5.5. Full command of the official language(s) of the country in which the air ambulance service is based
4.3.3.5.6. A good working knowledge of the English language if the service is operating internationally
4.3.3.5.7. Postgraduate training / qualifications in patient transfer from recognised courses and providers in transfer medicine or aviation medicine
4.3.3.5.8. A thorough understanding of the concepts of safe and effective patient transfer, by ground and air
4.3.3.6. The MD operates within the mission statement and scope of the Service and according to local and international standards.
4.3.3.7. The MD demonstrates sound clinical and logistical judgement when planning and undertaking missions
4.3.3.8. The MD practices and promotes the provision of high standards of care for all patients using the Service
4.3.3.9. The Medical Director has other important areas of organisational responsibility which include:
4.3.3.9.1. Responsibility for recruitment, training and CPD for healthcare staff
4.3.3.9.2. Ensuring the continuing competency and currency of medical personnel
4.3.3.9.3. Development and maintenance of guidelines / SOP's relating to specific patient conditions and how they should be managed during patient transfer
4.3.3.9.4. Ensuring the Service has an effective framework of Clinical Governance, including audit, quality improvement, risk and medicines management
4.3.3.9.5. Developing and managing robust processes to identify, document, investigate and resolve adverse clinical events and near-misses, in order to improve patient safety and quality of care.
4.3.3.9.6. Chairs regular Medical Department Governance / Quality meetings with the aim of improving patient care and service delivery.
4.3.4. **Clinical Services Manager**
4.3.4.1. The Service employs a Clinical Services Manager (CSM), who may be a Flight Nurse Manager / Chief Flight Nurse, or other senior healthcare professional
4.3.4.2. The CSM shall have knowledge and experience in both air and ground patient transport, depending upon the scope of the service and reports to the Medical Director
4.3.4.3.The CSM maintains clinical currency by undertaking regular external work and training in hospitals or clinics
4.3.4.4. The CSM should undertake regular flying duties (at least monthly) in order to maintain an effective service overview and flight currency
4.3.4.5. The role of the Clinical Services Manager shall include responbsibility for, or oversight of the following:
4.3.4.5.1. Day-to-day running of the Medical Department
4.3.4.5.2. Oversight of current and planned cases, working with the Medical Director and other key post-holders within the Service
4.3.4.5.3. Interface between the Medical Department and other organisational functions such as Flight Operations
4.3.4.5.4. Clinical case management and appropriate escalation of complex cases to the Medical Director
4.3.4.5.5. Initial screening of completed case documentation, identification of issues for follow-up and reporting to the Medical Director
4.3.4.5.6. Medical Department human resources issues
4.3.4.5.7. Recruiting, interviewing, training records, currency and competency status for Flight Medical Crew
4.3.4.5.8. Maintenance of rotas, availability calendar, and key operability status board(s)
4.3.4.5.9. Stock management and procurement of:
4.3.4.5.9.1. Medicines
4.3.4.5.9.2. Medical equipment
4.3.4.5.9.3. Medical consumables
4.3.4.5.9.4. Medical gases
4.3.4.5.10. Restocking / management of medical equipment and pharmacy bags/stores following each mission
4.3.4.5.11. Management of contracts for external service providers in areas including:
4.3.4.5.11.1. Cleaning and disinfection of the aircraft and medical equipment
4.3.4.5.11.2. Waste and sharps disposal
4.3.4.5.11.3. Medical equipment servicing
4.3.4.5.11.4. Medical gases - supply and service
4.3.4.5.11.5. Management and oversight of blood and blood products (if used)
4.3.4.5.11.6. Issuing of uniforms and appropriate personal protective equipment to Flight Medical Crew
4.3.4.5.12. Additional Clinical Services Manager duties may be shared with the Medical Director, and may include:
4.3.4.5.12.1. Reviewing and updating of Medical SOP's and Guidelines
4.3.4.5.12.2. Recruitment, training and Continuous Professional Development for non-physician medical personnel
4.3.4.5.12.3. Clinical and logistical decisions and advice regarding patient care
4.3.4.5.12.4. Daily allocation of Flight Medical Crew to missions, based on clinical need and risk anlysis

4.3.4.5.12.5. Active involvement in Clinical Governance and Quality Improvement programmes
4.3.4.5.12.6. Oversight of mission documentation, including medical reports, briefing notes and handover forms
4.3.4.5.12.7. Medical and Operational planning and prioritisation, in conjunction with the Medical Director and Flight Operations

4.3.5. Clinical and/or Flight Coordinators (when used by the Service)

4.3.5.1. If the service employs one or more Clinical Coordinators, they shall have experience in both air and ground patient transport consistent with the mission statement and scope of service
4.3.5.2. Clinical Coordinators should maintain their clinical currency by undertaking regular duties and training in local hospitals or clinics
4.3.5.3. The responsibilities of the Clinical Co-ordinator role include:
4.3.5.3.1. When required, deputising for all the role of the Clinical Services Manager
4.3.5.3.2. Day-to-day continuity of cases, including effective handover of clinical and logistical information between shifts
4.3.5.3.3. Day to day interface with Flight Medical Crew and Flight Operations
4.3.5.3.4. Daily medicines management and medicines audit
4.3.5.3.5. Daily checking and upkeep of medical equipment and consumables

4.3.6. Flight Doctors

4.3.6.1. If the service employs its own Flight Doctors they shall comply with the following criteria:
4.3.6.1.1. Hold a current license to practice from the country in which the air ambulance service is based
4.3.6.1.2. At least two years of clinical experience, in a relevant specialty e.g. anaesthesia, intensive care medicine, or emergency medicine
4.3.6.1.3. At least 12 months experience in a critical care environment (if undertaking critical care transfers)
4.3.6.1.4. Maintains clinical currency in a relevant medical role on at least a monthly basis
4.3.6.1.5. Has full command of the official language of the country in which the air ambulance service is based
4.3.6.1.6. Has a good working knowledge of the English language if the service is operating internationally
4.3.6.1.7. Undertakes regular Continuous Professional Development relevant to the Flight Doctor role
4.3.6.1.8. When the Service uses temporary Flight Doctors:
4.3.6.1.8.1. They should be trained by the Service and be familiar with Service's policies and procedures
4.3.6.1.8.2. They should provide clinical care to a level that matches or exceeds the permanent medical staff

4.3.7. Flight Nurses

4.3.7.1. Each Flight Nurse meets national regulatory criteria for employment as a qualified and registered nurse
4.3.7.2. Each Flight Nurse is trained by the Service and is familiar with Service's policies and procedures
4.3.7.3. There should be at least 12 months experience in a relevant nursing role e.g. Intensive Care or Emergency Department nursing
4.3.7.4. Flight Nurses undertake regular Continuous Professional Development relevant to the Flight Nurse role

4.3.8. Flight Paramedics

4.3.8.1. Flight Paramedics must meet the essential national regulatory criteria for employment as a qualified and registered paramedic
4.3.8.2. Each Flight Paramedic is trained by the Service and is familiar with Service's policies and procedures
4.3.8.3. There should be at least 12 months experience as a frontline paramedic
4.3.8.4. Flight Paramedics undertake regular CPD relevant to the Flight Paramedic role

4.3.9. Flight Allied Healthcare Professionals (AHP's) - i.e. non-nurse, non-physician roles such as Respiratory Technician, Midwife, Physiotherapist

4.3.9.1. Flight AHP's must meet the essential national regulatory criteria for employment in their specialty
4.3.9.2. There must be evidence of a clear legal or regulatory framework to support the use of AHP's in patient transfer
4.3.9.3. Each Flight AHP is trained by the Service and is familiar with Service's policies and procedures
4.3.9.4. There should be at least 12 months experience in the relevant specialty
4.3.9.5. Flight AHP's undertake regular CPD relevant to their role
4.3.9.6. Corporate indemnity insurance should cover the Flight AHP roles
4.3.9.7. AHP's should receive the equivalent induction training, and CPD to the regular Flight Medical Crew
4.3.9.8. The service must provide evidence of the means by which AHP's are supported and supervised during missions

4.3.10. Flight Specialist Personnel (e.g. Pediatric, Neonatal, Cardiac Perfusionists, ECMO and Balloon Pump Specialists)

4.3.10.1. Specialist Personnel may be employed or sub-contracted for specialised transfers and should meet the following criteria:
4.3.10.1.1. Compliance with national licence, registration and/or certification requirements of the country in which the Service is based.

4.3.10.1.2. Be in possession of recognised specialist knowledge and skills, relevant to the specific mission

4.3.10.1.3. Specialist Personnel should receive equivalent Induction Training and CPD, or be directly supervised by a regular member of Flight Medical Crew during missions

4.3.11. Training Manager

4.3.11.1. A Training Manager should be responsible for the content and delivery of the Service's training. This may be the Medical Director or another individual, depending on the size and scope of the Service

4.4 Medical Department - Documentation and Patient Records

4.4.1. Patient care records, meeting minutes and policies / procedures are stored according to the Aeromedical Service´s Information Governance Policy and due respect is given to patient-sensitivie and confidential information

4.4.2. Patient care records will be securely stored for the minimum period of time, as defined by local regulations

4.4.3. A copy of the patient care record is handed-over to the receiving facility for appropriate continuity of care

4.4.4. If the Service uses an electronic patient record system, a paper-copy of the patient transfer record is made available at patient handover for the receiving facility

4.4.5. A Mission Case File is constructed for every mission (may be paper or electronic) and should include:

4.4.5.1. Requesting organisation, with corresponding date and time of the request

4.4.5.2. Patient demographics including age, height, weight, and recumbant measurements to ensure stretcher, loading device and cabin door suitability

4.4.5.3. The clinical and social status of the patient and any travelling companions

4.4.5.4. The patient's geographical location with details of the sending and receiving healthcare facilities

4.4.5.5. The planned modes of transportation including ground and air ambulances and the details of any third party providers

4.4.5.6. Communications log between provider and transferring facility to obtain a history of events and up to date clinical report prior to clinical team departure

4.4.6. The mission case file should be easily accessible to the Flight Medical Crew prior to and during the mission

4.4.7. A Patient Transfer Record is completed during every mission (paper or electronic) and should include:

4.4.7.1. Flight Medical Crew Identifiers and professions / seniority

4.4.7.2. Purpose of the transport

4.4.7.3. Important event timings e.g. take-off, and landing times, arrival times and timing of clinical events

4.4.7.4. Clinical assessment of the patient prior to departure from point of origin

4.4.7.5. Patient condition at predetermined time intervals during the transfer (including documentation of vital signs) - the frequency of observations is appropriate for the condition of the patient

4.4.7.6. Any treatments given or medical interventions made and the patient’s response to the treatment

4.4.7.8. Transport modalities for all stages of the transfer.

4.4.7.9. Details of the sending and receiving medical teams and confirmation of receipt of clinical handover

4.4.8. The completed Patient Transfer Record is summarised, the data from which is used to maintain a database of missions used for Clinical Governance

4.4.9. Medical Department - Clinical Policies, Procedures and Guidelines

4.4.9.1. There are provider-specific medical policies, guidelines and procedures supporting the delivery of high quality care care and immediately available to all staff

4.4.9.2. Policies are dated and signed by at least two appropriate managers

4.4.9.3. Policies are reviewed and updated (where needed) annually by senior members of the Medical Department

4.4.9.4. There are policies on the management of specific clinical conditions that are commonly encountered by the Service

4.4.9.5. There is a policy on when / how to escalate a case during the quotation / planning phase for senior medical input

4.4.9.6. Specific policies (or policy sections within a manual) should be in place for:

4.4.9.6.1. Medical risk identification, management and mitigation

4.4.9.6.2. Pre-mission preparation and planning

4.4.9.6.3. Initial patient assessment and preparation for flight / transfer

4.4.9.6.4. In-flight medical interventions / capabilities

4.4.9.6.5. Patient handover

4.4.9.6.6. Medico-legal aspects of international transfers (e.g. movement narcotics / medicines management and physician licence to practice)

4.4.9.6.7. Circumstances under which 'tarmac transfers' are allowed and how they should be conducted

4.4.9.6.8. Multiple-patient transfers (within the capacity of the aircraft and Flight Medical Crew and with due considerations for infection control and patient dignity)

4.4.9.6.9. Carriage of travelling companions

4.4.9.6.10. Guidelines for palliative / end of life transfers (if undertaken)
4.4.9.6.11. Continuity of patient care on long haul missions and during aircraft delays / technical issues
4.4.9.6.12. Transportation of patients with psychiatric or mental health conditions
4.4.9.6.13. Venous thromboembolism risk assessment and prophylaxis
4.4.9.6.14. Pressure area assesment, prophylaxis and treatment
4.4.9.6.15. Guidelines for patient transport documentation / electronic patient record completion
4.4.9.6.16. A generic Infection Control policy, which should include (see also separate section for highly contagious disease transport):
4.4.9.6.16.1. Procedures for patients with communicable diseases, such as barrier nursing and post-mission disinfection
4.4.9.6.16.2. The use of PPE, such as gloves, goggles and masks, along with effective hand hygiene
4.4.9.6.16.3.The use of a portable isolation unit, if applicable (see section on highly contagious diseases)
4.4.9.6.16.4. Disposal of sharps and clinical waste
4.4.9.6.16.5. Single use consumables where possible and procedures for effective disinfection & sterilisation for multi-use items
4.4.9.6.16.6. Cleaning and disinfecting of the patient cabin area, equipment, and Crew uniforms
4.4.9.6.16.7. A dress code for Flight Medical Crew that is appropriate for infection control
4.4.9.6.17. Carriage of 'bariatric patients' or patients with larger body sizes
4.4.9.6.17.1. Weight restrictions for stretcheers and related systems (such as loading equipment) should be clearly defined
4.4.9.6.17.2. Dimensions restrictions for the cabin door, stretcher and cabin environment should be clearly defined
4.4.9.6.17.3. Patients with a body size exceeding the above restrictions should generally not be carried unless specialised aircraft and/or equipment is employed and a full formal risk / benefit analysis is conducted in the planning phase
4.4.9.6.17.4. Specific manual handling procedures (including loading / unloading) should be defined (and trained / practised) when carrying bariatric patients
4.4.9.6.17.5. There should be specific guidelines for the emergency evacuation of bariatric patients from the cabin in the event of a clinical or aviation emergency
4.4.9.6.17.6. Any specialised equipment for the carriage of bariatric patients should be detailed, maintained to a good quality and all mission flight crew should be proficient in its use
4.4.9.6.17.7. Standards of care for bariatric patients should meet the same overall standards as for any other patient group carried by the Service
4.4.9.6.17.8. Ground transportation should be considered and specific ground ambulances with enhanced capability for bariatric transfers should be used when appropriate
4.4.9.6.18. In the event of unexpected clinical complications during transfer, there should be:
4.4.9.6.18.1. A manual of medical emergencies that might be encountered during flight, that is readily available to Flight Medical Crew during a live mission
4.4.9.6.18.2. The manual should include common medical emergencies of the cardiorespiratory systems and how they are managed
4.4.9.6.18.3. The manual should include a flowchart that covers:
4.4.9.6.18.3.1. Immediate Management
4.4.9.6.18.3.2. Method of communication with Base / escalation for support and advice
4.4.9.6.18.3.3. When to divert or abandon the transfer, if no longer fit to fly
4.4.9.7. Induction and Continuous Professional Development training for Flight Medical Crew Training should support the above policies

4.5. Medical Department - Human Resources
4.5.1. All Flight Medical Crew must be licensed, registered, certified or permitted to practice according to local law and regulations
4.5.2. During the recruitment process, relevant background checks and 'due diligence' should be performed for all Flight Medical Crew
4.5.3. During the recruitment process, all Flight Medical Crew must meet a minimum 'Person Specification' or a minimum set of educational requirements according to the scope of service and their role within it
4.5.4. All Flight Medical Crew should act in an ethical and moral way, consistent with guidelines set out by the local / national healthcare licensing authority
4.5.5. There should be a company specific code of ethics and conduct for Fligtht Medical Crew
4.5.6. Flight Medical Crew skill retention is demonstrated via a mission log book and training portfolio kept up-to-date by both the individual and by the Service
4.5.7. All Flight Medical Crew should participate in a minimum number of regular missions in order to retain skills and knowledge. This will depend on the Service's volume of work, but should be defined in a Medical HR Policy
4.5.8. Medical Department - Appraisals and Performance Review
4.5.8.1. All Medical Department staff have a regular (at least annual) formal appraisal from a manager, which should include a performance review and plan for the next period.
4.5.8.2. All routine appraisals should be formally documented and stored as part of the HR record
4.5.8.3. Extraordinary appraisals may be performed in exceptional circumstances, such as following critical incidents or for 'performance management' when performance falls below the standard expected
4.5.8.4. Any Extraordinary Appraisals or performance management reviews should be documented and kept as part of the HR record

4.6. Medical Department - Occupational Health

4.6.1. The Service has an Occupational Health Policy(s) that address the following issues:

4.6.1.1. Pre-employment due diligence checks should include occupational health screening and immunisation history

4.6.1.2. The Service keeps records on blood borne pathogen exposure incidents, post-exposure follow-up protocols and staff support

4.6.1.3. Employee 'equality and diversity' should always be considered during recruitment of new staff. Staff with additional needs should be treated equitably, within the scope and practicalities of the service

4.6.1.4. During the 'onboarding' process, consideration should be given to any chronic health condition and how the service might accomodate such conditions whilst maintaining a safe and effective environment for staff and patients

4.6.1.5. Each member of Flight Medical Crew should declare themselves physically and mentally fit to fly and to conduct the given mission prior to each mission dispatch

4.6.1.6. Staff should report any health-related issues that may affect their performance during a mission, such as the use of chronic medication (e.g. sedatives) or a recent history of diving

4.6.1.7. The Service shall have a uniform policy which includes personal protective equipment (PPE) and how this should be used

4.6.1.8. Crew duty-time limitations and breaks for Flight Medical Crew that recognises the issue of crew fatigue and implements approriate safeguards

4.6.1.9. If appropriate, the use of hearing protection on the ground and in the air in environments experiencing excessive noise, as defined by local laws

4.6.1.10. An absence policy that should include specific guidelines around working during pregnancy or when suffering from acute illnesses such as gastrointestinal upset

4.6.1.11. There should be a policy on (and training for) Manual handling (lifting and loading)

4.6.1.12. There should be a specific drugs and alcohol misuse policy

4.7. Flight Medical Crew Training

4.7.1. There should be a structured Induction Course as part of staff 'on-boarding' and regular Continuous Professional Development at least annually for all Flight Medical Crew

4.7.2. Training should be available to all Flight Medical Crew and a full training record should be kept as part of the individual's HR record

4.7.3. Training is mapped against aeromedical competencies defined by the Training Manager or Medical Director according to training course content

4.7.4. Completion of training is documented for each member of Flight Medical Crew and is a pre-requisite before undertaking any unsupervised live missions

4.7.5. Attendance and performance at Induction Training and Continuous Professional Development is documented in a training record and forms part of the annual appraisal

4.7.6. Training should be offered with a combination of face to face and online / distance learning, appropriate to the needs of the service and local healthcare regulation

4.7.7. Induction Training and CPD (or training confirmed via prior education and competency testing) should cover a range of topics including , but not limited to the following:

4.7.7.1. Non-Clinical Aspects

4.7.7.1.1. General company introduction including company history

4.7.7.1.2. Introduction to the philosophy, capabilities and structure of the air ambulance service

4.7.7.1.3. Overview of how a mission should be planned and conducted from quotation to completion

4.7.7.1.4. Overview of company policies, procedures and guidelines and how to access them

4.7.7.1.5. Human factors and Crew Resource Management

4.7.7.1.6. The role of Flight Medical Crew: pre-departure, during and post-mission

4.7.7.1.7. Communication, caring and empathy - the 'soft' skills needed in good aeromedical transportation

4.7.7.1.8. Medical equipment competancy checks and corresponding training where necessary

4.7.7.1.9. Aircraft essential safety and performance knowledge, specific to the aircraft type(s) in use

4.7.7.1.10. Personal health and safety in and around the aircraft (inc. the concept of a 'sterile cockpit')

4.7.7.1.11. Aircraft emergency procedures, specific to the aircraft type(s) in use

4.7.7.1.12. Survival training if appropriate to local geography and regulations

4.7.7.1.13. Occupational health; Flight Medical Crew fitness to fly and stress management

4.7.7.1.14. Clinical Governance, including:

4.7.7.1.14.1. Risk analysis and management

4.7.7.1.14.2. Medical audit

4.7.7.1.14.3. Appraisal and CPD

4.7.7.1.14.4. Documentation and incident reporting

4.7.7.1.14.5. Quality improvement programmes

4.7.7.2. Clinical Aspects

4.7.7.2.1. Basic altitude physiology and pathophysiology
4.7.7.2.2. Aircraft acceleration / decelearation and the physical forces affecting the patient
4.7.7.2.3. Caring for patients during the transfer and specifically in the aircraft cabin, including limitations of space and equipment
4.7.7.2.4. Infection control, including carriage of potentially contagious patients.
4.7.7.2.5. Use of medical gases in the flight environment, including:
4.7.7.2.5.1. The benefits, limitations and hazards of supplemental oxygen in flight
4.7.7.2.5.2. Safe storage, use and handling of portable oxygen cylinders and the aircraft fixed oxygen supply
4.7.7.2.5.3. Different oxygen storage and delivery devices, such as cylinders, concentrators, ventilators and masks
4.7.7.2.5.4. Calculation of oxygen supply requirements for the whole mission and the addition of adequate reserves
4.7.7.2.6. Specific Clinical Conditions relevant to aeromedical transfer:
4.7.7.2.6.1. Respiratory disease, such as pneumothorax, pulmonary fibrosis and obstructive airways disease
4.7.7.2.6.2. Acquired brain injury and raised intracranial pressure
4.7.7.2.6.3. Cardiovascular disease, such as cardiac ischaemia and cardiac failure
4.7.7.2.6.4. ENT (disorders of the ears, nose and throat) and dental disease
4.7.7.2.6.5. Major trauma, including the managemnt of pain during transfer
4.7.7.2.6.6. Psychiatric and other mental health disorders
4.7.7.2.6.7. Bowel obstruction and the surgical abdomen
4.7.7.2.6.8. Specialised transfers such patients on ECMO, balloon pumps and other advanced organ support
4.7.7.2.6.9. Other patient groups as appropriate to the scope of service (e.g. paediatrics, neonates and highly infectious transports)
4.7.8. Induction Training topics are reviewed and refreshed during a programme of CPD, attended by all Flight Medical Crew, at least anually
4.7.9. Continuous Professional Development includes mission case discussions with learning from clinical and logistical challenges encountered on recent live missions

4.8. Medicines / Pharmaceutical Management

4.8.1. The service must demonstrate compliance with national medicines / pharmaceutical management laws, regulations and procedures
4.8.2. There should be an accountable person, chosen from the Medical Department management with overall responsibility for medicines management
4.8.3. A record should be kept of persons or personnel that have access to pharmacy stores
4.8.4. There should be a pharmacy room or store cupboard which complies with local laws and / or a national regulatory body
4.8.5. For effective control of some medicines (e.g. opiods / narcotics) the service must have a locked cupboard within another locked cupboard or room
4.8.6. The service shall comply with national laws, regulations (if applicable) and recommendations for the storage, carriage, supply and use of controlled drugs.
4.8.7. The Service complies with manufacturers recommendations for the storage, carriage, supply and use of refrigerated medicines / pharmaceuticals
4.8.8. There is a system to ensure that expiration dates are adhered to and checked regularly
4.8.9. There is evidence of accurate stock checking and a record of medicines / pharmaceuticals procurement
4.8.10. Evidence of medicines / pharmaceuticals that have been wasted, destroyed or returned unused is suitably recorded
4.8.11. If non-physicians dispense / administer pharmaceuticals, there is evidence that local / national laws and regulations are followed
4.8.12. Medicines / pharmaceuticals within equipment bags are regularly checked and restocked to ensure their completeness and suitability

4.9. Blood and Blood Products Management (if applicable)

4.9.1. There is a named, accountable individual with responsibility for the managemenmt of blood and blood products, if used
4.9.2. Blood and blood products (if used) should be stored, carried and administered according to local / national guidelines and recommendations

4.10. Medical Gases Management

4.10.1. The service must comply with national and/or local regulations and recommendations concerning medical gases.
4.10.2. There should be an accountable person, chosen from the medical staff, who has overall responsibility for medical gases management.
4.10.3. There is a secure, lockable medical gases storage area which complies with national health and safety recommendations
4.10.4. Full and partially-used cylinders should be stored seperately and clearly identifiied
4.10.5. Accurate stock checking and timely resupply of cylinders, with servicing / replacement according to supplier guidelines

4.10.6. There is evidence of regular inspection, certification and replenishment of aircraft installed oxygen cylinders

4.11. Medical Equipment Management

4.11.1. There should be an accountable person who has day-to-day responsibility for medical equipment management

4.11.2. The service must provide a list of all major items of medical equipment including:

4.11.2.1. The make and model of each item

4.11.2.2. Procurement, purchase or rental agreement

4.11.3. Equipment is regularly tested and inspected according to the manufacturer's guidelines and serviced by a qualified person / company

4.11.4. Equipment is stored and charged appropriately, in-line with manufacturer recommendations and local H+S regulations

4.11.5. There are maintenance and servicing records for each major item of medical equipment

4.11.6. Instruction manuals for all medical equipment are readily available (including in-flight e.g. PDF documents on tablets)

4.11.7. All flight medical crew are fully trained for each item of equipment they are likely to use in flight

4.11.8. The Service uses pre-dispatch checklists for medical equipment to be carried on missions

4.11.9. Medical equipment checking is conducted (and recorded) pre-flight to ensure all equipment is in good working order

4.11.10. Medical bags that have been used / are in-use should be seperate from mission-ready bags and denoted as such with the use of a secure tagging system or similar

4.11.11. Medical equipment that is faulty or out of service should be clearly seperated from mission-ready equipment in order to reduce the likelihood of error

4.12. Medical Equipment Inventory - the following items should be available and used on appropriate missions:

4.12.1. Patient Carriage and Movement Items:

4.12.1.1. Aircraft stretcher system(s) with loading device(s)

4.12.1.2. Vacuum / immobilisation mattress

4.12.1.3. Carrying sheet or transfer mattress

4.12.1.4. Memory foam / pressure-relieving mattress

4.12.1.5. Scoop stretcher

4.12.1.6. Extremity immobilisation devices / splints (e.g. box splints, Sager, Hare, Donway)

4.12.2. Airway and Breathing items:

4.12.2.1. Onboard oxygen cylinder (min 3000 L) with regulator

4.12.2.2. Portable oxygen cylinder (min 400 L) with regulator

4.12.2.3. Oxygen Flow meters

4.12.2.4. Oxygen masks - including, non-rebreath, fixed-fraction, CPAP etc (as applicable)

4.12.2.5. Nasal cannulae

4.12.2.6. Nebulisation device

4.12.2.7. Oro- and naso-pharyngeal airways

4.12.2.8. Airway suction device and suction catheters

4.12.3. Items Required for Mechanical Ventilation and Airway Support (if applicable):

4.12.3.1. Bag-valve mask with oxygen reservoir and tube cylinder connection

4.12.3.2. Laryngoscope(s) with suitable blades

4.12.3.3. Endotracheal tubes (range of sizes) with connectors

4.12.3.4. Endotracheal / supraglottic airway securing device

4.12.3.5. Tracheostomy kit

4.12.3.6. Magill forceps

4.12.3.7. Difficult airway kit e.g. bougie / airway stylet or introducer, video laryngoscope and supraglottic airways

4.12.3.8. Transfer ventilator able to support (if applicable):

4.12.3.8.1. Controlled and assisted ventilation ventilation modes, with pressure & volume control ventilation

4.12.3.8.2. Adjustable PEEP

4.12.3.8.3. CPAP system - for invasive and non-invasive ventilation

4.12.3.8.4. Oxygen concentration monitoring and low oxygen supply pressure alarm
4.12.3.9. Surgical / finger thoracostomy kit and/or seldinger chest drain set with Asherman / Russel chest seal
4.12.4. Items to Support the Circulation:
4.12.4.1. IV access kit
4.12.4.2. intraosseous access kit
4.12.4.3. Arterial line kit
4.12.4.4. Syringe drivers and infusion pumps
4.12.4.5. Intravenous fluid mounting system (e.g. IV poles / hooks)
4.12.4.6. IV pressure bag(s).
4.12.4.7. Portable ultrasound machine for difficult vascular access, echocardiography and lung ultrasound (if Flight Medical Crew are suitably trained and profficient)
4.12.5. Patient Monitoring:
4.12.5.1. Portable patient monitor with a minimum monitoring set of peripheral o2 saturations, 3-lead ECG and non-invasive blood pressure
4.12.5.2. 12-lead ECG capability for unstable cardiac transfers where applicable
4.12.5.3. Cardiac defibrillator with integrated rhythm strip recording
4.12.5.4. External transcutaneous pacing capability
4.12.5.5. Invasive intra-arterial blood pressure monitoring
4.12.5.6. Electronic core temperature monitor (e.g. tympanic or infra red system)
4.12.5.7. End tidal capnography for ventilated patients
4.12.6. Diagnostic Equipment
4.12.6.1. Stethoscope
4.12.6.2. Manual blood measuring pressure device
4.12.6.3. Thermometer
4.12.6.4. Pen torch / diagnostic light
4.12.6.5. Blood gas analysis including Hb, electrolyes, lactate
4.12.6.6. Blood glucometer
4.12.6.7. Portable ultrasound device (if Flight Medical Crew trained and experienced in its use)
4.12.7. Nursing and Hygiene Equipment
4.12.7.1. Vomit bag
4.12.7.2. Kidney dish
4.12.7.3. Bed pan and inserts
4.12.7.4. Urinary catheter kit and /or urine bottle
4.12.7.5. Absorbent gel
4.12.7.6. Biological fluids spill kit
4.12.7.7. Sharps container
4.12.7.8. Bedding equipment (including sheets; blankets; pillows; pillow cases)
4.12.7.9. Waste bags (standard and clinical)
4.12.7.10. Wound kit and dressings
4.12.7.11. Adhesive fixing materials
4.12.7.12. Nasogastric tube, drainage bag and securing dressings
4.12.7.13. Sterile gloves
4.12.8. Basic PPE (Personal Protective Equipment)
4.12.8.1. Antibacterial skin cleaning gel
4.12.8.2. Non-sterile gloves and sterile gloves
4.12.8.3. Aprons
4.12.8.4. Goggles
4.12.8.5. Surgical face masks/guards
4.12.8.6. N95 / FFP3 masks (if applicable to the Service & local regulations)

4.12.9. Other Miscellaneous Medical Items

4.12.9.1. Basic surgical kit (if applicable to the scope of the Service)
4.12.9.2. Emergency obstetric delivery set (as per scope of the Service)
4.12.9.3. Physical restraint systems (if this is used, there should be a specific policy and training around its use)
4.12.9.4. Electrical extension plug bank for medical equipment
4.12.9.5. International electrical adaptors for medical equipment
4.12.9.6. Cold storage box for temperature sensitive medications and consumables with temperature monitor
4.12.9.7. Securely stored spare batteries foor medical devices (avoids reliance on aircraft power supply)
4.12.9.8. Equiment for the safe use of blood and blood products, such as specific cold storage boxes and IV giving sets
4.12.9.9. Kit for the treatment of burns, such as flamazine (or similar), dressings and cling-film
4.12.9.10. Malaria / tropical diseases equipment (as appropriate to the scope of the service)
4.12.10. The Service has a system of stock-checking including expiry-date checks for immediate-use medical consumables

4.13. Medical Pre-Mission Planning

4.13.1. Flight Medical Crew are readily available within the response time determined by the service
4.13.2. The Service demonstrates an appropriate method for selecting the number and skill mix of Flight Medical Crew on each mission
4.13.3. There must be adequate Flight Medical Crewing to provide the full coverage of clinical activities that might be required on a mission
4.13.4. Due consideration is given to Flight Medical Crew fatigue in the planning stage, especially for long-haul missions
4.13.5. Flight Medical Crew should be able to take a short break from direct clinical care at least every 4 hours
4.13.6. A pre-flight medical and logistical briefing is provided to Flight Medical Crew well before dispatch, to allow for adequate preparation
4.13.7. Up to date medical records are available in the planning phase wherever possible, to faciltate effective risk analysis and mission planning
4.13.8.. Mission planning and preparation takes account of the patient's medical condition, required medical equipment and logistics including relevant geography
4.13.9. A formal, individual risk assessment is made for complex patients, long transfers and special category patients, such as mental health or infectious cases

4.14. Medical Intra-Mission Conduct

4.14.1. The aircraft cabin is managed like a hospital bed area for the purposes of cleaning, infection control and patient privacy / dignity
4.14.2. Policies and guidelines define what medical interventions may be performed during the transfer, with and without direct medical supervision
4.14.3. Flight Medical Crew work effectively as a team in clinical decision making and when performing interventions during the mission
4.14.4. All Flight Medical Crew practice effective infection control, reducing the likelihood of infection transmission between patient and crew (& vice versa)
4.14.5. Any catering / foodstuffs are stored and prepared away from the clinical area
4.14.6. Mission updates should be provided at key points to the Operational Base and to the client / commisioner of the service

4.15. Medical Post-Mission Arrangements

4.15.1. There is effective management and follow-up when any member of the mission crew has been exposed to an infectious pathogen
4.15.2. There is evidence of effective handover to the receiving facility, including verification that the patient has been received (e.g. signature of receiving team)
4.15.3. There is effective follow-up (including documentation and action plans) for any adverse events encountered on the mission
4.15.4. Interesting, complex or challenging cases are used as examples for education and Service quality improvement (with corresponding protection of personal data)
4.15.5. There is active canvassing of patient or client feedback on the conduct of the mission and this is used for Service improvement

4.16. Special Endorsement Missions

4.16.1. Aeromedical Transport of Patients with High Consequence Infectious Diseases (HCIDs)

4.16.1.1. The service must have a written policy defining and classifying HCID in respect to infection risk and mode of transmission
4.16.1.2. This policy shall clearly define the scope and limitations in accepting patients with HCID for aeromedical transport based on a risk-benefit analysis for the patient, crew and general public.
4.16.1.3. The internal risk analysis / decision making tool should be specified, and be clear and understood by all key decision-makers
4.16.1.4. Applicable national and international guidance and regulation must be considered, referenced and followed wherever possible
4.16.1.5. The policy includes personal infection control measures, testing (if available and appropriate) and vaccination (if available and appropriate) for all crew

4.16.1.6. If the scope includes the transport of patients with airborne HICDs and/or HICDs of extreme risk such as viral hemorrhagic fever, an appropriate portable medical isolation unit (PMIU) should be used
4.16.1.7. The Service shall demonstrate that the PMIU can be safely loaded, unloaded and accessed from at least three sides in the aircraft
4.16.1.8. If using a PMIU, the service should have a written policy covering the following:
4.16.1.8.1. Scope and limitation of use in terms of patient's diagnosis, acuity, clinical condition height weight and age
4.16.1.8.2. Medical Crew training, involvement and participation of (interface with) other personnel such as flight crew, engineers, ground ambulance staff etc.
4.16.1.8.3. Emergency drills: evacuation of patient and crew, access to emergency exits and rapid decompression scenarios should be considered
4.16.1.8.4. Communication plan (between patient and crew for awake patients)
4.16.1.8.5. Medical Crew briefing, unit preparation
4.16.1.8.6. Loading and un-loading
4.16.1.8.7. Patient preparation for PMIU transport and monitoring when inside
4.16.1.8.8. Handling of clinical in-flight/in-transport emergencies, including death in-flight
4.16.1.8.9. Disinfection, decontamination and equipment re-use
4.16.1.8.10. Waste disposal
4.16.1.9. There should be an additional policy(s) for other situations with significant risks of contamination / infection that do not meet the definition of HCID:
4.16.1.9.1. Aeromedical transport of patients exposed to biological, chemical or nuclear warfare
4.16.1.9.2. Aeromedical transport of asymptomatic but potentially infectious patients
4.16.1.9.3. Aeromedical transport of immunocompromised patients

4.16.2. Aeromedical Transport of Pediatric Patients
4.16.2.1. The Service has a clear policy on Flight Medical Crew allocation, training and expertise for the different patient populations (i.e. toddlers and small children, schoolchildren, adolescents)
4.16.2.2. Flight Medical Crew with adequate training and expertise in paediatric transfers must accompany all transports of pediatric patients
4.16.2.3. Any external expert personnel not part of regular Flight Medical Crew should be accompanied by regular Flight Medical Crew for the duration of the mission and have training in aviation physiology
4.16.2.4. The Service has a written policy on its scope and boundaries for aeromedical transport of pediatric patients
4.16.2.5. The policy includes a section on parental presence during aeromedical transport of neonatal and pediatric patients
4.16.2.6. The Service has appropriate equipment to safely and efficiently provide routine care, diagnosis, and treatment of medical emergencies in toddlers and small children during aeromedical and ground transportation
4.16.2.7. The Service Demonstrates that all pediatric equipment can be safely loaded, unloaded, secured and accessed from at least three sides when used in the aircraft
4.16.2.8. Appropriate Equipment to safely transport and restrain toddlers and small children in the aircraft and during ground transportation is provided
4.16.2.9. Appropriate Equipment and consumables to safely and efficiently ventilate toddlers and small children is available
4.16.2.10. Ventilators should have specific pediatric ventilation modes such as humidified and warmed invasive and non- invasive ventilation (CPAP and nHFNC)
4.16.2.11. Appropriate monitoring equipment to safely and efficiently monitor toddlers and small children
4.16.2.12. Appropriate monitoring sensors and electrodes must be provided. These should include non-invasive and invasive monitoring
4.16.2.13. Appropriate equipment to safely and efficiently administer i.v. medication to toddlers and small children
4.16.2.14. Infusion pumps and systems that enable delivery of small volumes and exact dosing are available

4.16.3. Aeromedical Transport of Neonatal Patients
4.16.3.1. The Service has a clear policy on Flight Medical Crew allocation, training and expertise for preterm neonates and neonates
4.16.3.2. Flight Medical Crew with adequate training and expertise in neonatology must accompany all transports of neonatal patients
4.16.3.3. Any external expert personnel not part of regular Flight Medical Crew should be accompanied by regular Flight Medical Crew for the duration of the mission and have training in aviation physiology
4.16.3.4. The Service has a written policy on its scope and boundaries for aeromedical transport of neonatal patients
4.16.3.5. The policy includes a section on parental presence during aeromedical transport of neonatal patients
4.16.3.6. The Service has appropriate equipment to safely and efficiently provide routine care, diagnosis, and treatment of medical emergencies in neonates during aeromedical and ground transportation
4.16.3.7. Appropriate Equipment to transport neonates and preterm neonates in a thermo-neutral environment is provided (Incubator, Babypod etc)
4.16.3.8. Indications for the use of each thermoregulatory device in terms of suitable patient populations and in-aircraft use is specified
4.16.3.9. The Service Demonstrates that all neonatal equipment can be safely loaded, unloaded, secured and accessed from at least three sides when used in the aircraft
4.16.3.10. Appropriate Equipment and consumables to safely and efficiently ventilate neonates is available
4.16.3.11. Ventilators should have specific neonatal ventilation modes such as humidified and warmed invasive and non- invasive ventilation (CPAP and nHFNC)

4.16.3.12. Appropriate monitoring equipment to safely and efficiently monitor neonates is provided
4.16.3.13. Appropriate monitoring sensors and electrodes must be provided. These should include non-invasive and invasive monitoring
4.16.3.14. Appropriate equipment to safely and efficiently administer i.v. medication to neonates is used
4.16.3.15. Infusion pumps and systems that enable delivery of small volumes and exact dosing are available

4.16.4. Aeromedical Transport of Patients with a Mental Health Condition

4.16.4.1. The Service has a written policy that defines which patient groups with mental health problems may be carried
4.16.4.2. This policy clearly outlines the minimum staffing levels required for these transfers (including external staff such as mental health nurses from the transferring facility)
4.16.4.3. Flight Medical Crew with appropriate training, skills and experience in mental health transfers should be used on all mental health patient missions
4.16.4.4. Any local/national regulations and guidelines surrounding the care and transportation of mental health patients, including restraint and deprivation of liberties are followed
4.16.4.5. Each mental health transfer should be discussed with the Medical Director prior to acceptance
4.16.4.6. There should be a detailed formal risk analysis and transfer plan for each mental health transfer, known and understood by all Flight Medical Crew prior to dispatch
4.16.4.7. In situations where pharmacological or physical restraint is required, the least restrictive approach that ensures the safety of the mission should be used
4.16.4.8. There is a policy on safe pharmacological sedation, including when and how it should be used, and by whom
4.16.4.9. The policy includes oral and IV sedation guidelines
4.16.4.10. The policy includes minimum standards for safe monitoring for each type of sedation
4.16.4.11. If physical restraints are in use, there is a clear policy for how and when they should be used
4.16.4.12. Staff using physical restraints are fully trained in their use and have regular refresher training to ensure currency
4.16.4.13. The use of pharmacological or physical restraints is clearly documented on the patient transfer record along with the reason for their use

5. Aviation

5.1. Compliance with Aviation Regulatory Authority

5.1.1. The provider must indicate the regulatory authority and legal system(s) under which the program operates

5.1.2. The provider must provide a license, permit, certificate or similar document signed by a national, regional or international regulatory aviationbody allowing for the program to operate

5.1.3. The licence/permit/certificate holder must meet all appropriate aviation requirements in the country of which the program is based

5.1.4. Fixed Wing Air Ambulance Operations shall be licensed and operated under regulations for Commercial Aviation unless regulated by specific laws for Fixed Wing Air Ambulance operations

5.1.5. The Provider must provide a copy of the following evidence:

5.1.5.1. An Operations Manual which is in compliance with national/regional/international aviation regulations in accordance with the service and region in which the provider operates

5.1.5.2. Air Operators Certificate (AOC or Part 135 certificate), issued by the local Civil Aviation Authority

5.1.5.3. Aircraft insurance certificate stating clearly the liabilities and limits of coverage

5.1.5.4. Airworthiness certificate for each aircraft which the provider operates for aero-medical operation and is to be accredited

5.1.5.5. The Provider shall indicate each aircraft which will be accredited by (1) name, (2) type, and (3) registration number

5.1.5.6. The service must provide flight logs or mission records to prove that only the aircraft identified for accreditation are routinely used for air ambulance transportation

5.2. Operational capability

5.2.1. Flight Crews

5.2.1.1. The Flight Crew licenses are current and valid for the type of aircraft flown

5.2.1.2. There are appropriate written qualification criteria for all Flight Crews based on experience

5.2.1.3. Pilot flight medical examinations are documented and expiry dates are flagged and routinly checked

5.2.1.4. Flight Crews current passport and visas information are documented and expiry dates are flagged and routinly checked

5.2.2 Flight Crew training

5.2.2.1 Flight Crews training records are clearly documented with clear expiry dates including check flights

5.2.2.2.Simulator training program for Flight Crews is in place unless simulator is not available for type of aircraft flown or not suitable

5.2.2.3. Flight Crews must attend Crew Resource Management (CRM) or other human factors training at least once a year

5.2.2.4. Mandatory first aid training for Flight Crews once a year is performed and documented including expiry dates

5.2.2.5. There must be periodic, annual or semi-annual, check flights performed by a suitable senior training flight captain

5.2.2.6.Check flights must be formally recorded and documented and must include a written examination

5.2.2.7. SMS (safety management system) training must be undertaken every three years

5.2.2.8.Aircraft emergency drills training must be performed annually

5.2.2.9. Aircraft fire training shall be taken at least every three years

5.2.2.10. Aircraft ditching drills and evacuation training shall be conducted every three years

5.2.2.11. Flight Crew shall receive training specific to the aero-medical environment, including:

5.2.2.11.1. Physiology of Altitude

5.2.2.11.2. Basic neurophysiological mechanics

5.2.2.11.3. Handling of patient compartment including stretcher, oxygen, loading

5.2.2.11.4. Electronical interfaces

5.2.2.11.5. Dangers of interference of electromagnetic radiation in the aircraft (such as avionics and medical equipment)

5.2.2.11.6. Safety briefings of flight crew and patient /companion prior to departure

5.2.2.11.7. Safety briefings with Medical Crew prior to departure

5.2.2.11.8. Medical dangerous air cargo

5.2.2.12.The program enterains a mechanism for engaging and completing a Flight Risk Management System on all transports. Documentation of FRAT scores are evaluated by senior staff for trends on a quarterly basis

5.2.3. Mission Planning

5.2.3.1. The service has a standardised mission planning process evidenced by written protocols and procedures

5.2.3.2. Weather data must be easily available in the flight planning process, written protocol and procedures must be evident

5.2.3.3. NOTAMS are part of the process and must be easily available for flight planning

5.2.3.4. Flight planning shall include an airport security briefing for the air and medical crew (where necessary)

5.2.3.5. In high risk areas, there must be adequate provision for ensuring the security of the personnel and the aircraft

5.2.3.6. The Service shall provide a flight following process

5.2.3.7. There is a Flight Operations Manual approved by an aviation regulatory body

5.2.3.8. Only maps approved by a regulatory authority are being used. All maps are current and updated

5.2.3.9. A dedicated staff member is responsible for keeping flight manuals updated

5.2.3.10. VFR or IFR flight plans are filed for every mission, and updated if and when necessary

5.2.3.11. Flight plans are filed by adequately trained personnel

5.2.4. Medical Crew

5.2.4.1. Permanent staff members shall attend Crew Resource Management (CRM) training with the Flight Crews annually

5.2.4.2 Aircraft emergency drills training is conducted with the permanent Flight Crews once a year

5.2.4.3 There is a policy for new medical crew to fly with an experienced senior staff member in the onboarding period as defined by the company, with a minumum 10 flight hours

5.2.4.4 Permanent Medical Crew shall receive first aid and equipment training with the Flight Crews at least every two years

5.2.5. Passengers

5.2.5.1. A list of passengers shall be prepared for every mission

5.2.5.2. A weight and balance report shall be prepared for every mission

5.2.5.3. Passenger(s), baggage and cargo weights are included in the weight and balance report

5.2.5.4. There is a policy for handling and limiting passengers' baggage

5.2.5.5. There must be a written poligy for passenger safety briefings

5.2.5.6. Passengers shall be provided with adequate aviation life support equipment (ALSE)

5.2.5.7. Meals or refreshments including drinks shall be provided to passengers on flights lasting more than 2 hours

5.2.5.8. In-flight catering must be appropriate for the cultural and religious orientation of crew, patient(s) and travelling companion(s) whenever possible

5.2.5.9. The service has a specific policy to handle combative patients / passengers

5.2.5.9.1. The policy clearly refuses patients or passengers who are considered a threat

5.3. Aircraft Maintenance

5.3.1 .All aircraft are maintained to the same good standard, at or above the criteria of the local regulatory aviation authority

5.3.2. A dedicated staff member is responsible for managing the aircraft maintenance schedules

5.3.3. The program must provide records or evidence which states whether it operates its own aircraft maintenance facility, or whether aircraft maintenance is conducted by external organisation(s)

5.3.4. The program must provide details of its maintenance facility(s), the regulatory body under which it/they operate, and copies of the MOA (Maintenance Organisation Approval) certificate(s), such as for Part-145 compliance

5.3.5. The Service provides evidence that the maintenance organisation(s) operate(s) a compliance criteria to demonstrate how they meet the requirements of (Part-145) MOA

5.3.6. At the completion of every maintenance task a person authorised by the national, regional, or international airworthiness authority signs a release stating that maintenance has been performed in accordance with the applicable airworthiness requirements. This must be a certified Aircraft Maintenance Engineer or Aircraft Maintenance Technician

5.3.7. The maintenance facility should operate its own safety and quality management and/or safety and quality assurance systems

5.3.8. Where the maintenance facility does not operate its own safety management or safety quality assurance system, the Service must provide evidence that its own safety system incorporates the work done by the maintenance facility

5.3.9. A routine maintenance and servicing plan must be provided. It should give evidence of anticipated down time for each aircraft

5.3.10. Historical servicing and maintenance records for each of the aircraft to be accredited must be provided by the Service

5.3.11. There is a written policy in place stating that aircraft can not be dispatched if maintenance / inspections are due

5.4. Aircraft performance records

5.4.1. The service shall provide a list of the aircraft types it uses for air ambulance work with details of the performance of each type. This shall include:

5.4.1.1. Cruise speed (kt)

5.4.1.2. Cruise ceiling (ft or m)

5.4.1.3. Best range (nm)

5.4.1.4. Best endurance (h:min)

5.4.1.5. Maximum payload (stretcher(s); passengers; crew)

5.5. Fixed Wing Aircraft requirements (The following criteria are applicable to every individual aircraft intended for accreditation)

5.5.1. Each aircraft shall be capable of carrying two medical crew and at least one stretcher patient with the required medical devices and equipment within the patient compartment

5.5.2. Each aircraft should be capable of cabin pressurisation or should fulfil the local and international regulations for the use of unpressurised aircraft

5.5.3. If unpressurised aircraft are used for the carriage of patients, the service must have a written policy which shows evidence of:

5.5.3.1. Established rules regarding when an unpressurised flight is acceptable and unacceptable

5.5.3.2. The Service will have clear written policies for unpressurised aircraft usage based on terrain, runway limitations and patient condition

5.5.3.3. The Service will have policies regarding oxygen usage for Flight and Medical Crew

5.6. Air Ambulance Cabin

5.6.1. General standards

5.6.1.1. Essential medical devices required for use outside the aircraft are easily accessible for the whole crew

5.6.1.2. The medical crew shall have easy access the patient´s vital body parts, e.g. head, chest and abdomen

5.6.1.3. The medical crew have sufficient space in the cabin to provide adequate treatment, monitoring, standard and emergency care

5.6.1.4. The patient compartment is designed and constructed to accommodate and securely stow the required medical devices

5.6.1.5. Medical devices are positioned to allow movement and patient handling of the device without obstructing aisles, emergency exits or patient loading and unloading sites

5.6.1.6. The cabin floor coverings are durable and easy to clean and disinfect (carpeted flooring is not acceptable unless fully and securely covered)

5.6.1.7. The ceiling, interior walls and doors of the cabin are lined with hard, durable materials to allow easy cleaning and disinfection

5.6.1.8. The interior of the cabin is designed to minimise the the transmission of infection and minimise the risk of injury to patient and crew

5.6.1.9. Interior material shall be flame resistant/retardant according to relevant national, regional or international standards

5.7. Aircraft stretcher system

5.7.1. Stretcher systems must be securely fitted to the aircraft interior in an approved and appropriate way, making it part of the airframe

5.7.2. Every aircraft with a fitted stretcher system has a dedicated (STC (Supplemental Type Certificate) for the designated aircraft

5.8. Aircraft cabin environment

5.8.1. Temperature control - Heating

5.8.1.1. The patient compartment heating system must be capable of raising the temperature from 0 to 18 degrees Celsius, when the outdoor temperature is 0 degrees Celsius

5.8.2. Temperature control - Cooling

5.8.2.1. The interior of the aircraft should be air conditioned.

5.8.3. There should be an auxiliary system to heat/cool the patient compartment when stationary and/or to preheat the engine, when operating in extreme environments.

5.8.4. Lighting

5.8.4.1. There is sufficient light to perform medical interventions safely at all times

5.8.4.2. Alternative sources of light are available in low light conditions

5.8.4.3. It is possible to dim lights within the patient compartment when required

5.8.5. Noise

5.8.5.1. If noise exposure in the cabin exceeds local safety regulations, ear protection for crew and patient is immediately available

5.8.6. Electrical supply

5.8.6.1. The cabin has a DC voltage power outlet of either 12 or 24V

5.8.6.2. The cabin has an AC voltage power outlet of either 230 or 110V supplied by an inverter, controlled from the cabin

5.8.6.3. Outlets are conveniently located in the area of the cabin that hosts the medical device(s)

5.8.6.4. Outlets for the medical devices shall be labelled with the nominal voltage and current rating.

5.8.6.5. Outlets must have a visible power indicator light

5.8.6.6. Electromagnetic interference from medical devices should not affect aircraft avionics and vice versa

5.8.7. Oxygen supply

5.8.7.1. Pressurised gas cylinders are approved for use in the aircraft with an STC or similar and securely mounted according to local regulations

5.8.8. Restraint systems

5.8.8.1. A cabin bulkhead or other barrier is in place preventing intrusion of items into the flightdeck in the event of a rapid deceleration

5.8.8.2. Medical equipment is securely attached (and stowed when not in use) in the cabin by either mounting systems or fixation devices

5.8.8.3. Medical equipment within the cabin are secured to the G-load requirements for the aircraft and to local / international regulations

5.8.8.4. Medical equipment and consumables not immediately required in-flight must be securely stowed but accessible to medical crew

5.8.8.5. Medical equipment and consumables are attached and stowed in order to prevent intrusion into working areas under aircraft acceleration and decceleration

5.8.8.6. Any cabinet drawers are lockable to prevent self-opening during flight

5.8.8.7. Stretcher patients are securely but comfortably restrained during flight, using a 5-point harness or similar

5.8.8.8. Stretcher patients are restrained by shoulder restraints for take-off and landing

5.8.8.9. Stretcher patients remain fully restrained during flight except during medical or nursing interventions

5.8.8.10. Stretcher patients should be fully recumbant during take-off and landing, unless required to be sat-up due to medical necessity (e.g. raised ICP)

5.8.8.11. All passengers should remain securely seated and restrained during flight unless a medical intervention or other movement is necessary. Seatbelt signs from the Captain should be obeyed by all

5.8.9.Patient loading and unloading

5.8.9.1. Safe loading and unloading of patients is possible under all operational conditions

5.8.9.2. Staff are trained-in and practice approved manual handling techniques

5.8.9.3. Loading / unloading is always led by a regular member of air or medical crew, including when assisted by other airport ground staff

5.8.9.4. During loading / unloading, the patient remains in a safe, secured and comfortable position

5.8.9.5. The Service has a policy for managing bariatric patients (heavy or difficult loads) during loading and in-flight restraints

5.8.9.4. The policy includes details of weight and dimension limits for the aircraft and loading system

5.8.9.5. The cabin door facilitates safe loading of the patient up to the recommended limits for patient dimensions and weight

5.8.9.6. During loading and unloading, medical crew maintain immediate access to all lines, drains, airways and tubes at all times to prevent dislodgement

5.8.9.7. A designated loading system must be in place for difficult loading procedures, including bariatric patients and heavy medical equipment

5.8.9.8. The loading system is inspected and maintained according to the manufacturers guidelines

5.8.9.9. The loading system is checked by air crew and or medical crew prior to each mission dispatch

5.8.10. Emergency exits

5.8.10.1. Aircraft emergency exits are free from any obstruction during flight

5.8.10.2. An alternative exit from the cabin is available, permitting the evacuation of patient and crew

5.8.10.3. All doors and emergency exits are fully operable from the inside and must be capable of being opened fully and held open by a mechanical device

5.9. Flight safety and Inspections

5.9.1. The Service provides a list of any flight safety inspections by the local aviation regulator in the preceeding three years. Reports from inspections should be made available for review.

5.9.2. Details of any and all reportable flight accidents and incidents in the preceding three years are provided

5.9.3. Details of any and all reportable ground accidents and incidents in the preceding three years are provided

5.10. Safety equipment

5.10.1. The safety equipment on the aircraft must be in accordance with local / international regulations

5.10.2. A policy is in place for checking safety and survival equipment contents and expiration or maintenance dates

5.10.3. A detailed list of all safety and survival equipment carried onboard each aircraft is provided

5.10.4. Safety and survival equipment must be available to all persons on board

5.10.5. Safety and survival equipment is appropriate to the geography of operation and adequate for the maximum number of occupants

5.10.6. Safety and survival equipment is periodically tested according to the manufacturer's guidelines

5.10.7. Safety and survival equipment is maintained appropriately as per manufacturers recommendations
5.10.8. There is an emergency locator transmitter (ELT) on board, or portable ELT(s) / radios carried by aircrew
5.10.9. The aircraft is equipped with a Flight Data Recorder (FDR)
5.10.10. The service shall provide details of the FDR (i.e. equipment installed, location on the aircraft and parameters recorded)
5.10.11. The aircraft is equipped with a Cockpit Voice Recorder (CVR)
5.10.12. The aircraft is equipped with a Traffic alert and Collision Avoidance System (TCAS)
5.10.13. The aircraft is equipped with weather radar

5.11. Rescue, emergency and protective equipment
5.11.1. Basic protective clothing is available for every crewmember, according to local requirements, including:
5.11.1.1. High visibility reflective jacket
5.11.1.2. Severe weather apparel, if required according to the location and scope of the Service:
5.11.1.2.1. Cold weather suit
5.11.1.2.2. Cold weather gloves
5.11.1.2.3. Wet weather protection
5.11.2. Life jacket, per aircraft occupant
5.11.3. Life raft, if operating over the Ocean more than 5 NM off shore
5.11.4. Torch, headlamp or spotlight
5.11.5. Fire extinguisher

5.12. Dangerous air cargo and other hazards (if applicable)
5.12.1. If applicable, the Service has to have a policy on the management of dangerous air cargo and other hazardous substances on board the aircraft in compliance with th
5.12.2. If applicable, Aircraft tail numbers must be provided for each onboard hazard
5.12.3. If applicable, A nominated member of staff is responsible for all matters relating to dangerous air cargo
5.12.4. If applicable, Documentation regarding dangerous air cargo conforms to local / international standards and regulations

5.13. Aircraft for short-term / short notice use provided by partner organisations (if applicable)
5.13.1 Declaration, Liabilities and Insurance
5.13.1.1. The provider is allowed to use non-accredited Aircraft compliant with the outlined standards ten (10) times in total per year. If the use of non-accredited aircraft exceeds the quota of 10 times per year it must be added to the EURAMI Registration in the usual manner
5.13.1.2. The arrangement should be for the short-term use of additional aircraft – i.e. one-off or occasional use when regular aircraft are in maintenance etc
5.13.1.3. The provider must inform EURAMI of the new short-term aircraft supplier in the form of a quarterly report, which includes the name of the provider and tail number of the aircraft

5.13.1.4. A written agreement should be in place between the air ambulance operator and the aircraft supplier to ensure the safety and accountability of each mission. The agreement should include clear lines of accountability, liability and the required insurances
5.13.1.5. The agreement with the aircraft operator should conform to the requirements of local laws and regulations. All external suppliers of short-term aircraft should comply with the standards set out in the Aviation sections of this document
5.13.1.6. When operating a short-term aircraft, it should be clear to all parties who have responsibility for the aviation and medical aspects of the mission. The medical aspects of the mission should generally fall under the Governance of the provider, unless the mission (with the agreement of the client) is formally sub-chartered to a second party
5.13.1.7. Liabilities should be clearly defined. Any issues with the aircraft and its operation should lie with the aircraft operator. Any issues with the medical management of the patient should lie with the air ambulance provider, unless the mission (with the agreement of the client) is sub-chartered to another provider
5.13.1.8. Insurances should cover the aircraft and indemnify the medical operation on the short-term aircraft

5.13.2. Audit & Selection of Partner
5.13.2.1. It should be demonstrable that any new partner supplying short-term aircraft for aeromedical missions is selected by the Provider with all due care and attention as to the quality of the organisation and its aircraft assets
5.13.2.2. The selection criteria / audit process for the external supplier should be robust and fit for purpose. The results of the audits of external partners should be available for inspection by EURAMI during a EURAMI Audit

5.13.3 Short-Term Aircraft Capabilities
5.13.3.1. The short-term aircraft should offer both medical and technical abilities that are at least as good as aircraft in the regular fleet. For example, stretcher systems should be industry-standard and technical facilities such as flight following, satellite communications, navigation systems etc should be available
5.13.3.2. A familiar (ideally electric) loading and unloading system that is industry standard or well-recognised in aeromedical work
5.13.3.3. Effective method of communication between medical and flight crews
5.13.3.4. The provision of passenger safety and comfort in the new partner aircraft should equal or exceed that used for the regular fleet aircraft
5.13.3.5. Aircraft Cabin: The cabin of each new aircraft used for air ambulance missions should fully comply with the standards set out for aircraft cabins in the relevant section of the EURAMI Standards
5.13.3.6 Particular emphasis should be placed on the following:
5.13.3.6.1. The Cabin should have thermostatic temperature control and portable refrigeration devices should be used where necessary to maintain the medication ‘cold-chain’ for temperature-sensitive medicines

5.13.4 Medical Equipment for Use On-Short-Term Aircraft
5.13.4.1. Suppliers should ensure that on-board medical equipment is of a high standard and should ideally match the type and function of that carried by the regular fleet aircraft, in order t minimise retraining. Where any differences occur, equipment needs to be as good or better than the equipment used on regular fleet aircraft.
5.13.4.2. The stretcher system should be certified for use with an STC (Supplementary Type Certificate) and should be correctly installed in the aircraft.

5.13.4.3. The stretcher system should be checked and maintained according the standards of the manufacturer and the STC by a qualified aircraft engineer.
5.13.4.4. The use of the stretcher system should be familiar to the medical crew and flight crew. If this is not the case, training in its use should take place prior to mission commencement, including loading, unloading and emergency drills.
5.13.4.5. The stretcher base system should supply the appropriate electrical, oxygen and suction facilities. Back-up devices should be available in the event of supply failure.
5.13.4.6. There should be provision for full, uninterrupted patient monitoring for the duration of the transfer.
5.13.4.7. Medical devices should have the facility to be connected to the aircraft mains electric supply in order to charge batteries on long flights. This will require a suitably robust electrical inverter system.
5.13.4.8. Any additional items carried on the short-term aircraft should have the facility to be safely secured to the aircraft / stretcher in a manner equivalent to the regular fleet aircraft. Examples include:
5.13.4.8.1. Monitors
5.13.4.8.2. Ventilators
5.13.4.8.3. Infusion pumps
5.13.4.8.4. Suction devices
5.13.4.8.5. Portable incubators / baby pods
5.13.4.8.6. Portable isolation units for patients with contagious diseases

5.13.5. Training and Human Factors in Relation to Short-Term Aircraft
5.13.5.1. All personnel to be fully trained in the medical operation of the aircraft – including pilots and medics, prior to commencing a mission.
5.13.5.2. Any new aircrew employed by the partner organisation that are used to operate the additional aircraft should be trained in aeromedical transportation, as set out in the standards section 6.2.1.19
5.13.5.3. Medical staff should be fully trained and proficient in the use of any new or alternative medical devices on the short-term aircraft. This would include stretcher, base station, medical gas outlets and suction
5.13.5.4. A pre-flight briefing between flight crew and medical crew prior to each mission, should detail:
5.13.5.4.1. Weather
5.13.5.4.2. Expected clinical condition of the patient
5.13.5.4.3. Any issues with the aircraft such as :
5.13.5.4.4. Any offline devices
5.13.5.4.5. Non-standard kit
5.13.5.4.6. 02 reserves
5.13.5.4.7. Loading and unloading procedures

5.13.6. Infection Prevention and Control
5.13.6.1. Aircraft interiors should be regularly cleaned and fully disinfected after each flight when carrying a potentially infectious patient

5.13.6.2. Aircraft fixtures and fittings should be suitable for the aeromedical environment and allow thorough cleaning. E.g. hard seat and floor coverings and the avoidance of materials that may harbour infection such carpets and curtains
5.13.6.3. There should be a method of isolating the flight deck from the passenger compartment when transporting infectious patients
5.13.6.4. An effective means of infection prevention and control for all stages of the transfer that is rehearsed and familiar to all personnel, including both medical and flight crew
5.13.6.5. If the service is using a portable isolation unit, this should have the relevant specifications and be fit for the purposes of aeromedical transportation, including safety mechanisms for the loss of cabin pressure and easy access to the patient in the event of patient deterioration

5.13.7 Aircraft Maintenance
5.13.7.1 The aircraft should be maintained to at least the standard of the providers regular fleet