



**Australian Government**

**Civil Aviation Safety Authority**

# **NOTICE OF PROPOSED RULE MAKING**

## **Regulation of aeroplane and helicopter 'ambulance function' flights as Air Transport operations**

Issued for public consultation by  
CASA's Standards Division

**Document NPRM 1304OS – July 2013**

**Project Number: OS 01/11**

## Audience

### This NPRM will be of interest to:

- operators of medical transport 'ambulance function'-type flights, both current and prospective
- current holders of a charter Air Operator's Certificate (AOC)
- prospective holders of an Air Transport (AT) AOC (authorised under Part 119 of CASR)
- prospective operators under Parts 121, 133, 135 and 138 of CASR
- state government ambulance and medical service providers
- individuals and entities who:
  - provide aircraft maintenance for medical transport operations
  - contract the services of medical transport operators.

## Key dates

### Consultation period

CASA is responsible under the *Civil Aviation Act 1988*, amongst other functions, for developing and promulgating appropriate, clear and concise aviation safety standards. In the performance of this function and the exercise of its powers, CASA must, where appropriate, consult with government, commercial, industrial, consumer and other relevant bodies and organisations.

*Civil Aviation Act 1988 Paragraph 9(1)(c) and Section 16*

To ensure clear and relevant safety standards, we need the benefit of your knowledge as an aviator, aviation consumer and/or provider of related products and services.

**You can help by completing the NPRM Response Form and returning it to CASA by 27 September 2013.**

## Foreword

This Notice of Proposed Rule Making (NPRM) is issued by the Civil Aviation Safety Authority (CASA) with a view to ensuring that Australian aviation safety requirements are current and appropriately address safety risks.

CASA's policies require that the aviation safety regulations must:

- be necessary to address known or likely safety risks
- provide for the most efficient allocation of Industry and CASA resources
- be clear and concise
- where appropriate, be aligned with international standards.

The purpose of this NPRM is to advise the public and aviation community of CASA's intent to regulate, to the greatest extent practicable, ambulance function flights<sup>1</sup> to the same safety standards that are currently applicable to AT operations. This will extend to adoption of AOC certification requirements, operating standards and maintenance standards.

The NPRM outlines a new and updated policy that specifically categorises Medical Transport (MT) flights so that they operate under the requirements of an AT AOC (issued under Part 119 of CASR) and the applicable operational rule set (i.e. Part 133 of CASR for helicopter operations and either Part 121 or 135 of CASR for aeroplane operations).

The proposed policy will ensure that appropriate mechanisms are included within the AT regulations to afford MT flights with:

- sufficient operational flexibility
- the safety benefits available under Part 119 of CASR.

CASA considers that Part 119 of CASR, with its robust operator management systems, should be implemented by (and integrated into) these essential passenger transport services. This policy and change of classification is based on CASA's recognition that the focus of these operations is primarily passenger-carrying in nature, albeit in a highly specialised manner, and conforms more closely to international norms for the conduct of these operations.

However, CASA acknowledges that, in some cases, applying all of the *Air Transport Operations* suite of standards to MT flights would not be practicable. Due to the highly specialised nature of some MT flights, some of the rules in these operational Parts will not apply and other requirements that are not characteristic of normal AT operations will be addressed specifically for MT flights.

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<sup>1</sup> referred to as Medical Transport (MT) flights in this NPRM

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This NPRM canvasses those areas of the *Air Transport Operations* suite where additional compliance or relief considerations would be required, taking into account the purpose and nature of MT flights. CASA seeks comment from the public and aviation community on this proposed policy change to MT operations.

I would like to thank you for expressing interest in this proposal. I emphasise that no rule changes will be undertaken until all NPRM responses and submissions received by the closing date **27 September 2013** have been considered.

Peter Boyd  
Executive Manager  
Standards Division

July 2013

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# 1 Reference Material

## 1.1 Acronyms

The acronyms and abbreviations used in this NPRM are listed in the table below.

| <b>Acronym</b> | <b>Definition</b>                                |
|----------------|--|
| AMT            | Aeroplane Medical Transport                      |
| AOC            | Air Operator's Certificate                       |
| ASEA           | Approved Single Engine Aeroplane                 |
| ASETPA         | Approved Single Engine Turbine Powered Aeroplane |
| AT             | Air Transport                                    |
| CAO            | Civil Aviation Order                             |
| CAR            | <i>Civil Aviation Regulations 1988</i>           |
| CASA           | Civil Aviation Safety Authority                  |
| CASR           | <i>Civil Aviation Safety Regulations 1998</i>    |
| CAT            | Commercial Air Transport                         |
| EASA           | European Aviation Safety Agency                  |
| EMS            | Emergency Medical Services                       |
| FAA            | Federal Aviation Administration (USA)            |
| FAR            | Federal Aviation Regulation                      |
| FATO           | Final Approach and Take-off Area                 |
| FRMS           | Fatigue Risk Management System                   |
| HEMS           | Helicopter Emergency Medical Services            |
| HMT            | Helicopter Medical Transport                     |
| ICAO           | International Civil Aviation Organization        |
| IFR            | Instrument Flight Rules                          |
| MT             | Medical Transport                                |
| NFRM           | Notice of Final Rule Making                      |
| NPRM           | Notice of Proposed Rule Making                   |
| NVG            | Night Vision Goggles                             |
| NVIS           | Night Vision Imaging System                      |
| RFDS           | Royal Flying Doctor Service                      |

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| Acronym | Definition                                 |
|---------|--|
| SAR     | Search and Rescue                          |
| SARP    | Standards and Recommended Practices (ICAO) |
| SMS     | Safety Management System                   |
| SOR     | Summary of Responses                       |
| TAWS    | Terrain Awareness and Warning Systems      |
| TEM     | Threat and Error Management                |
| VFR     | Visual Flight Rules                        |

## 1.2 Definitions

Terms that have specific meaning within this NPRM are defined in the table below.

| Term               | Definition   |
|--------------------|--|
| Conn               | means to direct, by voice instructions to the pilot, the steering and positioning of a helicopter  |
| Crew               | of an aircraft comprises the crew members.   |
| Crew member        | a person is a <i>crew member</i> of an aircraft if the person is carried on the aircraft and is: <ul style="list-style-type: none"> <li>(a) a person: <ul style="list-style-type: none"> <li>(i) who is authorised by the operator of the aircraft to carry out a specified function during flight time relating to: <ul style="list-style-type: none"> <li>(A) the operation, maintenance, use or safety of the aircraft; or</li> <li>(B) the safety of its passengers; or</li> <li>(C) the care or security of any cargo which may affect the safety of the aircraft or its occupants; and</li> </ul> </li> <li>(ii) who has been trained to carry out that function; or</li> </ul> </li> <li>(b) a person who is on board the aircraft for the purpose of: <ul style="list-style-type: none"> <li>(i) giving or receiving instruction in a function mentioned in subparagraph (a) (i); or</li> <li>(ii) being tested for a qualification associated with a function in subparagraph (a) (i); or</li> </ul> </li> <li>(c) a person authorised by CASA under regulation [91.125], or by the operator, to carry out an audit, check, examination, inspection or test of a person mentioned in paragraph (a) or (b).</li> </ul> |
| Flight crew member | means a crew member who is a pilot or flight engineer assigned to carry out duties essential to the operation of an aircraft during flight time.   |
| HMT aircrew member | means a crew member of a helicopter (other than a supernumerary crew member) who has been trained, found competent and assigned by the operator: <ul style="list-style-type: none"> <li>(a) to assist the pilot in tasks specified in the operator's exposition in regard to the operation of the helicopter; or</li> <li>(b) to 'conn' the pilot to position and reposition overhead a HMT operating site; or</li> <li>(c) to operate the winch on the helicopter (if any) during HMT operations; or</li> </ul>   |

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| Term                         | Definition  |
|------------------------------|---|
|                              | (d) to supervise rappelling operations (if any) during HMT operations; or<br>(e) to supervise or assist a medical crew member in the performance of his or her duties on the helicopter; or<br>(f) to use an auto-hover system to position, or reposition, the helicopter by inputs to an auto-hover trim control (if any), under the supervision of the pilot in command.  |
| Medical crew member          | means crew members, with specific aviation medical transport patient care training and additional operator aircraft emergency proficiency training related to their role as a crew member on the aircraft, who are authorised by the operator for duty on an aircraft conducting a medical transport operation, and who are informed of, understand and accept the associated safety risks <sup>2</sup> .   |
| Medical Transport operations | means a flight in an aircraft the specific purpose of which is to facilitate emergency medical assistance, in situations where to render that assistance, rapid aerial transportation is essential, or alternately to facilitate medical assistance and transport, where aerial transport is considered necessary as determined by a medical practitioner or tasking agency, by carrying:<br>(a) ill or injured persons<br>(b) other persons directly involved with the person in (a)<br>(c) medical personnel; or combinations of the above. |
| Medical Transport operator   | means a Part 119 air transport AOC holder whose approved exposition authorises the operator to conduct medical transport operations.  |
| Medical passenger            | means an ill or injured person on a medical transport flight, or other person directly involved with the medical care or support of an ill or injured person, who is carried on a MT operation.   |
| Passenger                    | in relation to an aircraft, means a person:<br>(a) who:<br>(i) intends to travel on a particular flight on the aircraft; or<br>(ii) is on board the aircraft for a flight; or<br>(iii) has disembarked from the aircraft following a flight; and<br>(b) who is not a member of the crew of the aircraft for the flight.   |
| Person directly involved     | a person (who may or may not be medically trained) whose carriage is considered necessary to the wellbeing of the ill or injured person, for the purposes of their medical transport flight.  |
| State                        | a country that is a signatory to the Convention on International Civil Aviation (the Chicago Convention).   |

## 1.3 References

Part 91 of CASR<sup>3</sup>. *General operating and flight rules.*

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<sup>2</sup> an operator will be required to outline and define in its exposition the task and duty statements, training and recency associated with each medical crew member position and how it is integrated into their operations

<sup>3</sup> consultation drafts of Parts 91, 119, 133 and 135 of CASR are available online at [http://www.casa.gov.au/scripts/nc.dll?WCMS:PWA::pc=PC\\_91072](http://www.casa.gov.au/scripts/nc.dll?WCMS:PWA::pc=PC_91072).

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Part 119 of CASR<sup>3</sup>. *Air operator certification – commercial air transport.*

Part 121 of CASR. *Commercial air transport operations (aeroplanes).*

Part 133 of CASR<sup>3</sup>. *Commercial air transport and aerial work operations (rotorcraft).*

Part 135 of CASR<sup>3</sup>. *Air transport operations (small aeroplanes).*

Part 138 of CASR. *Aerial work operations - aircraft.*

Regulation 206 of CAR. *Commercial purposes (act, s 27 (9)).*

Civil Aviation Order 48.1 Instrument (2013).

Annex 6 Part I to the Chicago Convention. *International Commercial Air Transport – Aeroplanes.*

Annex 6, Part III to the Chicago Convention. *International Operations – Helicopters.*

Annex 6, Part III, Chapter 1 to the Chicago Convention. *Definitions*

*US NTSB Special Investigation on Emergency Medical Service Operations.* Available online at  
<http://www.nts.gov/doclib/safetystudies/SIR0601.pdf>

*Initiatives to Improve Helicopter Air Ambulance Safety.* FAA publication, available online at  
[http://www.faa.gov/news/fact\\_sheets/news\\_story.cfm?newsId=11957](http://www.faa.gov/news/fact_sheets/news_story.cfm?newsId=11957)

## 2 Industry consultation

### 2.1 Consultation on this NPRM

CASA is required to register and review each comment and submission received, but will not individually acknowledge a response unless specifically requested to do so. All submissions will be published without attribution in a Summary of Responses (SOR), typically provided as an Annex to the subsequent NFRM. If consent is provided, the contributor's name will additionally be published as a List of Respondents, typically provided in the subsequent NFRM.

At the end of the response period for public comments, all submissions will be analysed, evaluated and considered. Subsequent to the closing date for comments, an NFRM, including a SOR, will be prepared and made publicly available in conjunction with the making of the Final Rule.

Prior to the release of this NPRM, CASA has conducted informal meetings and briefings with key industry stakeholders, including the Royal Flying Doctor Service. The views of these stakeholders have provided CASA with insight into the limitations and practicalities of the various options for regulatory implementation, and have influenced CASA's approach to development of this NPRM.

CASA will also consider convening a working group to review comments made in response to the NPRM during the consultation phase and prior to the development of the NFRM.

## 3 Proposed change

### 3.1 Background

#### 3.1.1 Interpretation of medical transport flights

Leading aviation nations, such as the UK, Europe, Canada, New Zealand and the USA (for the USA, specifically when the patient is on board the aircraft), recognise that MT flights, including:

- patient inter-hospital retrieval
- international patient repatriation
- emergency medical service (EMS) operations,

are conducted as air transport operations under the authority of an AOC issued by the operator's State. It is widely understood that this approach to classification and level of regulation has many advantages for the overall context of these flights, particularly from operational and safety systems perspectives.

These nations have applied definitions and applicability of commercial air transport (CAT) Standards and Recommended Practices (SARPs) – as outlined in Annex 6, Parts I and III to the Chicago Convention – to their operations. In Annex 6 to the Chicago Convention, the International Civil Aviation Organization (ICAO) defines commercial air transport as:

**commercial air transport operation** (is) an aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire.<sup>4</sup>

Clearly, the abovementioned countries have interpreted this to mean that the transport of passengers for MT flights is an AT operation, and have written their legislation for these operations accordingly. CASA is of the view that such an interpretation confers many safety advantages to MT flights, chiefly that the full range of organisational, equipment, flight crew and safety system standards confirmed by the issue of an AOC are applicable to such operations.

ICAO reinforces this through their definition of an AOC:

**Air operator certificate (AOC).** A certificate authorizing an operator to carry out specified commercial air transport operations<sup>5</sup>

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<sup>4</sup> Annex 6, Part III, Chapter 1 to the Chicago Convention

<sup>5</sup> Annex 6, Part III, Chapter 1 to the Chicago Convention

By way of comparison, ICAO 's definition of aerial work operations is clearly distinct from air transport operations:

**Aerial work.** An aircraft operation in which an aircraft is used for specialized services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.<sup>6</sup>

ICAO has produced no SARPs for aerial work and, in fact, Annex 6, Part III, Chapter 2 to the Chicago Convention states:

Recommended Practices are not applicable to helicopters engaged in aerial work.

Instead, ICAO leaves individual States to resolve the operational classification and regulation of aerial work, and to control this work under their domestic regulatory programs.

### 3.1.2 Australian classification of medical transport flights

Amongst leading aviation nations, Australia is unique in classifying MT flights as aerial work under the prescribed purpose of 'ambulance functions', outlined in subregulation 206 (1) (a) of CAR. This classification subjects Australia's MT operations to a different standard of regulation than would be the case under the ICAO AT standards and those of most other leading ICAO Member States.

In the proposed new CASRs, aerial work operating under Part 138 of CASR will be regulated quite separately from AT operations. This means that aerial work operations can have an aerial work-specific certification system, which may or may not involve the issue of an AOC, and a set of task-specific regulations that will be primarily of a domestic nature. For example, it is envisaged that the policy for Part 138 would only be applicable to operators conducting aerial work within Australian Territory or in oceanic airspace.

Conversely, a reclassification to AT operations will bring MT flights into line with the ICAO AT SARPs. This provides Australia's aeromedical operations with greater recognition of the international nature of AOCs issued for such operations. ICAO outlines in Annex 6 that:

Contracting States shall recognize as valid an air operator certificate issued by another Contracting State provided that the requirements under which the certificate was issued are at least equal to the applicable Standards specified in this Annex<sup>7</sup>.

The requirements of Part 119 of CASR will ensure this equivalence of standards with ICAO Annex 6 is in place for Australian operators.

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<sup>6</sup> Annex 6, Part III, Chapter 1 to the Chicago Convention

<sup>7</sup> underlined text is CASA's emphasis

### 3.1.3 Australian industry statistics – ambulance functions

CASA's AOC data indicates that there are 97 Australian AOC holders whose AOC authorises them to conduct 'ambulance functions'. These AOCs are divided as follows:

- approximately 50 helicopter AOCs
- approximately 47 aeroplane AOCs
- of the 97, there are 6 operators within this band with AOCs that authorise both aeroplane and helicopter operations.

Of these 97 AOCs, at least 85 certificates currently authorise charter operations as well as 'ambulance functions', indicating that the majority of AOC holders would need to transition to the *Air Transport Operations* suite to continue their current operations. Therefore the transition to regulation under Part 119 of CASR will occur regardless of the classification of the 'ambulance function' operations.

A closer analysis of the activities of the 97 operators who conduct 'ambulance functions' indicates that 25 of these operators conduct ambulance functions as a primary tasking, in their operations. This situation suggests that approximately 75% of operators have chosen to include this type of operation 'just in case' it is required at some time. A further interesting aspect is that of the 25 'primary' operators mentioned, 22 operators also have a current charter AOC. A general review by CASA of the 3 remaining operators indicates that they appear to have reasonably mature operations and systems, such as Safety Management Systems (SMS) and a training and checking system, which would facilitate a smoother transition to the requirements of Part 119 of CASR for these operators as well.

## 3.2 Case for change

### 3.2.1 Industry trend towards informal adoption of Air Transport standards

Australia's MT operators in general uphold high safety standards in the conduct of aerial work MT operations, often operating well above the minimum safety compliance requirements. CASA is aware that, over recent years, Industry has used many of the Air Transport standards as fundamental elements of their internal risk management and operational processes. In this situation it is CASA's opinion that these operators are not afforded full recognition for their proactive approach to safety while they continue to operate under the aerial work category. Nor does the aerial work category recognise that the fundamental purpose of MT flights is the carriage of passengers (in this case patients) and that these patients are often in no position to make informed decisions about the transport services they receive.

Given Industry's predisposition to a more risk-averse and safety-focused philosophy, CASA believes that Australia's new aviation safety regulations will benefit from a policy whereby MT flights are regulated as an AT operation and are subject to the same general standards that apply to other passenger transport operations.

### 3.2.2 International recognition of AOC authority

Future amendments to the civil aviation safety legislation (through Part 119 of CASR) will set a high standard for air operator certification relating to passenger transport. These standards will be closely aligned to the SARPs for Annex 6 to the Chicago Convention, which require AT operations to be conducted under an AOC authorisation.

As a result of this alignment, under the CASRs an MT operator would be expected to have in place the following CASA-approved systems and processes:

- safety management systems
- human factors and non-technical skills training
- a method of managing personnel fatigue
- training and checking for personnel
- operator expositions
- maintenance processes which include minimum equipment lists.

These systems are, in CASA's opinion, very relevant to the organisational model required for modern medical transport operations. Reclassification of MT flights as AT operations will bring Australia's aeromedical operations into line with the ICAO air transport SARPs and international leading practice. This will also (as outlined in 3.1.2) afford Australia's MT operators with greater international recognition of their AOC.

### 3.2.3 Standardisation

Currently, under CAR, the concept of what is an 'ambulance function' is not defined. CASA has recognised this lack of definition has the potential for a lack of standardisation when categorising MT flights. The specific definition of Medical Transport Operations, including Aeroplane Medical Transport (AMT) and Helicopter Medical Transport (HMT), will reduce the potential standardisation issues associated with use of a generic term that is itself not defined in CASA's current rule set. Clearer definition of what constitutes a MT flight will ensure clarity for the purposes of operational safety.

## 3.3 Options considered and assessed by CASA

When developing this proposed policy, CASA considered three principal options.

### 3.3.1 Option 1: Application of Air Transport standards to Medical Transport-specific aerial work regulations

*Helicopter and Aeroplane medical transport operations remain classified under the prescribed aerial work purpose of 'ambulance functions' and are certificated and regulated under Part 138 of CASR: Aerial Work Operations – aircraft (currently under development).*

This option retains the current classification of MT-type operations under the prescribed purpose of 'ambulance functions' within the aerial work provisions of Part 138 of CASR.

This option is a known quantity for Australian domestic operators and has been an accepted operational classification for many years. However, CASA's obligation to modernise the current aerial work 'ambulance function' category and recognise the more rigorous levels of risk management required for this predominantly passenger-carrying operation would result in the addition of many new AT-like provisions to Part 138 of CASR.

For example, many current operators who conduct 'ambulance function' tasks as a primary element of their operations already use training and checking systems, and safety management systems with robust internal reporting processes. Under option 1, Part 138 of CASR would be amended to reflect the increase in minimum acceptable safety standards that has occurred naturally within industry. Therefore to align Australia's 'ambulance function' operations with current operator requirements and required international standards, it is apparent that, in most cases, an aeromedical operator (even under Part 138) would be required to operate to an equivalent level of safety as is already required for an operator under Part 119 of CASR.

By enforcing this type of alignment across Parts 119 and 138 of CASR, CASA would have to introduce a more complex regulatory suite to accommodate the small proportion of general aerial work operators who conduct MT flights.

A further complication is that option 1 would erode the potential for MT operators to achieve international recognition for their AOC, as current government policy indicates that Australia's aerial work regulations and certification are limited to domestic operations and the operation of Australian aircraft over oceanic areas. Therefore, under this option, international 'ambulance function' operators would in any case need to hold an AOC issued under Part 119 of CASR. CASA considered that dual-classification for international and domestic operations was not an efficient model for such operations, as it had the potential to create confusion and conflict in applying the two sets of standards simultaneously.

### 3.3.2 Option 2: Mixed classification of Medical Transport operations, based on US FAR standards

*Based on the US Federal Aviation Regulation (FAR) requirements where operations would occur under Part 91 of CASR when positioning or for crew-only flights and become air transport (certificated under Part 119 of CASR and operated under Parts 121, 133 or 135 of CASR) when the patient is loaded onto the aircraft.*

The principal advantage of option 2 is the declassification of a MT flight once the patient is unloaded from the aircraft, allowing the MT operator to apply the less stringent operational criteria (from the Part 91 of CASR rule set) for positioning and crew-only flights.

This may afford operators a greater range of flight planning options related to:

- fuel load

- meeting weather criteria
- positioning for patient retrieval
- repositioning after patient retrieval has been completed.

CASA is of the opinion that the declassification model is not as effective at regulating MT operations as providing regulatory continuity for the full duration of the flight. This is evidenced by the fact that the FAA produces considerable amounts of additional advisory, guidance and educational material to support the safe operation of MT flights. Much of this additional information focuses on the need for operators to plan and operate their aircraft in closer alignment with AT standards, and a more risk aware manner in general, regardless of whether the patient is on-board or not.

CASA believes, and the US experience<sup>8</sup> has shown, that option 2 would require MT operators to apply significant additional levels of risk management (for hazard identification and risk mitigation) in the positioning flight phase, while also requiring the same level of certification as an air transport operator achieves under Part 119 of CASR.

### 3.3.3 Option 3: Reclassification of Medical Transport flights as Air Transport operations

*Helicopter and Aeroplane medical transport operations would be moved into the air transport classification and authorised by an AOC issued in accordance with Part 119 of CASR. Medical transport operations would be subject to the requirements of the applicable air transport regulation (i.e. Parts 121, 133 or 135 of CASR) and any overarching regulations from Part 91 of CASR, as applicable.*

Option 3, CASA's preferred option, reclassifies the current prescribed aerial work purpose 'ambulance functions' as an AT operation. Whilst MT flights will be classified as such, the AT standards would be supplemented with specific MT-type operational requirements, delivered through either:

- a legislative instrument
  - an MT-specific subpart included under Part 119 of CASR, or the applicable operational CASR Part (i.e. 121, 133 or 135)
- or
- appropriate relief provisions in the general operational rule set.

The certification and safety system requirements currently prescribed in Part 119 of CASR appear to be a good fit with the organisational model for medical transport operations. Furthermore, these provisions are based on compliance with the Chicago Convention, affording the highest levels of international standardisation and recognition.

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<sup>8</sup> supporting information is provided in the US NTSB Special Investigation on Emergency Medical Service Operations and the FAA's Initiatives to Improve Helicopter Air Ambulance Safety, referenced in Section 1.3 of this NPRM.

Option 3 aligns closely with the organisational model already in use by the majority of existing mature primary HMT and AMT operators, who have, for the most part, well established systems for:

- training and checking
- safety management
- flight following and operational control
- risk assessment and management.

This option ensures that MT operators would be subject to equivalent levels of surveillance by CASA as their current AT counterparts. The need for improved surveillance of MT operations is supported by recommendations from the *NTSB Special Investigation on Emergency Medical Service Operations*.

CASA believes that considerable benefit can be gained by using option 3 to remove many of the 'grey areas' relating to regulation of passenger carriage, as the MT operation would be conducted to the same standard as other 'passenger transport' operations.

By classifying the MT flight as AT from beginning to end, option 3 would avoid the complexities of options 1 and 2 and ensure that the AT operating systems and environment remain in force for the entire operation, **delivering maximum safety enhancement and benefit to Australia's MT operators and passengers.**

### 3.4 CASA's preferred option for change

CASA adopted a risk-based regulatory management strategy, with a passenger safety priority focus, when developing the new CASRs. This placed equal weight on the risk mitigation and safety protection of passengers:

- in operations where carriage is permitted on a publicly available or commercial basis  
or
- when passengers cannot be fully informed of flight risks and make a decision to fly prior to departure.

International standards (including the SARP to Annex 6 of the Chicago Convention) for flights involving the carriage of passengers are based on these operations being classified as AT operations.

Accordingly, CASA has proposed a policy based on option 3, whereby HMT and AMT operations would be reclassified from an 'ambulance function' under the prescribed aerial work purposes to an AT operation. Operations would consequently be authorised by an AOC issued in accordance with Part 119 of CASR. Medical transport operations would be subject to the requirements of the applicable air transport regulation (i.e. Parts 121, 133 or 135 of CASR) and

any overarching regulations from Part 91 of CASR, as applicable. Although these flights will be classified as an AT operation, specific MT-type operational requirements will be addressed through the regulatory development methods mentioned earlier in Section 3.3.3.

### 3.4.1 Definition of medical transport

Medical transport operations will be characterised as:

a flight in an aircraft, the specific purpose of which is:

- to facilitate emergency medical assistance in situations where, to render that assistance, rapid aerial transportation is essential
- or
- to facilitate medical assistance and transport when aerial transport is considered necessary, as determined by a medical practitioner or tasking agency

by carrying:

- ill or injured persons as medical passengers
- other persons directly involved<sup>9</sup> with the medical passenger
- medical personnel
- combinations of the above.

CASA does not intend to classify flights such as a search and rescue (SAR), which may also involve the coincident patient care of an injured survivor, as an MT operation. A SAR flight will remain classified as an aerial work emergency service operation, regardless of whether or not patient care is delivered, as the specific purpose of SAR is to locate and rescue persons from danger; medical care is only delivered if required.

### 3.4.2 Classification of medical transport within Air Transport operations

In the CASRs currently under development, the classification of AT operations is divided into 'passenger transport operations' and 'cargo transport operations'. As this proposed policy intends to regulate MT flights as AT operations, it follows that operators will be able to carry passengers and/or cargo, as per their exposition authorisations that were approved under their AOC.

It is CASA's proposed policy that if a flight commences with the express purpose of carrying a medical passenger *at any time*, then the MT flight is a passenger transport operation for the purposes of Part 119 of CASR and applicable operational rules.

Conversely, if the flight is solely for the purposes of carrying medical supplies (e.g. medical equipment, blood, organs or drugs), then it remains a cargo transport operation for the full duration of the flight, for the purposes of Part 119 of CASR and applicable operational rules.

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<sup>9</sup> a person directly involved is a person (who may or may not be medical trained) , but whose carriage is considered necessary to the wellbeing of the ill or injured person for the purposes of their medical transport flight.

If an MT flight is tasked initially to carry medical supplies (i.e. operating as 'cargo transport') and is then re-tasked during the operation to pick up medical passengers (i.e. retasked for 'passenger transport'), then the operation (i.e. flight crewing, aircraft equipment and operational requirements) must **comply with the 'passenger transport operations' standards** before accepting the re-tasking operation.

### 3.4.3 Medical Transport sub-categories

CASA proposes two sub-categories for MT operations:

- AMT; operating under:
  - Part 121 of CASR for large aeroplanes
  - Part 135 of CASR for small aeroplanes
- HMT; operating under Part 133 of CASR.

Due to the highly specialised nature of some MT operations, certain rules in these CASR operational Parts will not apply to AMT or HMT operations, either for the full duration of the operation or at specific operational times. Further, certain regulatory requirements that are not needed for non-medical AT operations will be addressed specifically for AMT and HMT flights.

### 3.4.4 Who can be carried on Medical Transport flights?

CASA recognises that, due to the specialised nature of some MT flights, operations are often conducted outside the gamut of normal AT operations, involving use of:

- specialised extraction methods
- confined areas for arrival/departure
- non-standard runways
- night vision goggles.

In reclassifying MT flights, CASA seeks to assure MT operators that they will be able to continue conducting these aspects of their taskings, provided that they demonstrate compliance with the required safety criteria set for those specialised processes within their standard operating procedures and operational capabilities.

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Accordingly, the substantive definitions<sup>10</sup> of 'passenger', 'crew', 'crew member' and 'flight crew' that currently apply to non-medical AT operations will be retained. This definition set will be extended, as follows, to introduce the defined persons who may be carried on an MT flight:

**Medical passenger** means an ill or injured person or other person directly involved with the medical care or support of an ill or injured person, who is carried on a MT operation.

**Medical crew member** means crew members, with specific aviation medical transport patient care training and additional operator aircraft emergency proficiency training related to their role as a crew member on the aircraft, who are authorised by the operator for duty on an aircraft conducting a medical transport operation, and who are informed of, understand and accept the associated safety risks.

**HMT aircrew member** means a crew member of a helicopter (other than a supernumerary crew member) who has been trained, found competent and assigned by the operator:

- to assist the pilot in tasks specified in the operator's exposition in regard to the operation of the helicopter
- to 'conn' the pilot to position and reposition overhead a HMT operating site
- to operate the winch on the helicopter (if any)
- to supervise rappelling operations (if any)
- to supervise or assist a medical task specialist in the performance of his or her duties on the helicopter; or
- to use an auto-hover system to position, or reposition, the helicopter by inputs to an auto-hover trim control (if any), under the supervision of the pilot in command.

From these definitions, it is evident that MT flights will have greater certainty of operation under the AT standards. Specific examples, showing the application of these new definitions to MT flights, follow:

**Example 1**

Persons who accompany an ill or injured person, such as a relative or carer, will be classified as medical passengers.

**Example 2**

If an operator is tasked to carry medical personnel (i.e. a doctor from a local hospital accompanying a patient to transit), the personnel will also be a 'medical passenger' and the authority of the AOC will unambiguously allow such carriage.

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<sup>10</sup> as defined in the CASR Dictionary.

**Example 3**

Specifically trained persons who are also medical or paramedical officers, whether under direct employ or contract to the operator, can be rostered as 'medical crew members' on the flight provided that have completed the operator's training and checking program for such persons.

**Example 4**

Medical personnel, carried for the purposes of clinics or other tasks in remote locations, will simply be 'passengers' for the purposes of the flight. As the operator's AOC authorises AT operations, such flights will occur under that AOC authority.

### 3.4.5 Multi-tasking compatibility

CASA is aware that many aeromedical operations traditionally carry out a number of additional taskings as part of their operations (see example 4). These tasks (e.g. clinic services and the carriage of medical teams for purposes other than aeromedical retrieval) quite often require the aeromedical operator to hold a charter AOC and an 'ambulance functions' aerial work certificate. Moving MT flights under AT standards will alleviate this requirement, allowing such operations to be conducted under a single AT AOC.

For additional operational considerations for specialised tasks, such as class D external load (i.e. winching) operations, the operator will detail a set of appropriate procedures in their exposition and obtain the necessary qualifications under Part 138 of CASR.

### 3.4.6 Cost efficiency

CASA considers that the potential additional costs associated with adopting this option would be outweighed by the safety benefits. In many cases, such costs are already absorbed by operators as they have (in their own right) upgraded their business models for contractual purposes, to meet the proposed AT requirements.

### 3.4.7 Crew considerations

Training considerations for normal MT flight and other crew can be easily absorbed into the air transport regulatory suite, as it already has a specific training and checking subpart.

Fatigue risk management requirements of MT operations can be managed via a Fatigue Risk Management System (FRMS) or specific reference provisions for these operations

### 3.4.8 Approved Single Engine Aeroplane

Operational requirements, as applicable to the nature of the route structure that applies to MT operations for operators using Approved Single Engine Aeroplanes (ASEA), can be considered and incorporated into the relevant Parts of the *Air Transport Operations* suite. CASA will base the new criteria on a modernised concept of the current ASETPA<sup>11</sup> criteria and will develop them in consultation with ASEA operators, using risk assessment and hazard management procedures that incorporate the latest capabilities of ASEA.

CASA's initial review of this potential indicates ASEA MT operations can occur effectively and we will continue to develop this with the industry ASEA operators.

### 3.4.9 Benefits and impacts of the preferred option

The potential advantages of the proposed policy change include both safety initiatives and standardisation, such as:

- mandated training and checking
- more robust aircraft equipment requirements
- introduction of fatigue risk management criteria to specifically address aeromedical operations
- a more appropriate organisational model for medical transport operators using the certification criteria of Part 119 of CASR
- a more robust operational rule set based on AT-type operations, with appropriate relief and additional criteria to allow the continued functionality
- greater operational and tasking flexibility for medical transport operators who conduct other associated operations such as clinic flights
- greater potential for recognition of AOC authorisations during international operations
- a reduction in issues associated with international operations
- high levels of ICAO compliance
- international standardisation and harmonisation
- enhanced potential for greater flexibility in ASEA operations
- mandated operational control policy with a focus on assisting the Pilot-in-Command to manage the risks of the operation without diminishing their responsibility.

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<sup>11</sup> Approved Single Engine Turbine Powered Aeroplane

The potential disadvantages of the proposed policy change include:

- Some operators may need to upgrade their organisational systems to meet the criteria of Part 119 of CASR.
- Some industry providers who conduct 'ambulance functions' as a secondary function may decide to move out of this sector.
- Some operators who do not presently have carrier's liability insurance cover will be financially disadvantaged by the requirement to gain this for their future operations.
- Some potential for increased operational costs (over those incurred for aerial work requirements) may arise due to the specifications of Part 119 of CASR and operational Part equipment requirements<sup>12</sup>. For example:
  - additional training and checking
  - requirement for an AT level of aircraft equipment fit criteria.

### 3.5 Key change proposal

CASA intends to reclassify MT flights and AT operations under the regulatory control of CASR 119 (for AOC authorisation) and CASRs 121, 133 and 135, as appropriate, for operational purposes. In making this regulatory change, CASA seeks to enhance the operational model for MT flights and, through this, improve safety. It is not CASA's intention to restrict MT operators from safely conducting tasks that are allowable under the current mix of aerial work provisions and robust risk management.

Whilst the majority of AT standards will be directly applicable to MT flights, a small subset of AT standards will either (i) be unsuitable in current form, or (ii) provide insufficient regulatory control. It is CASA's view such anomalies will be best addressed through either Part 119 of CASR or the relevant operational Part (i.e. Part 121, 133 or 135 of CASR), via:

- a specific MT subpart
- or
- legislative instrument attached to the appropriate Part, allowing consideration of these issues in a more flexible regulatory form.

Implementation of option 3 will cause additional compliance and relief considerations. These are described in Annex A. and summarised below:

- requirement for MT operators to maintain a formal set of policy and procedures to manage compliance with Part 121, 133 or 135 of CASR

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<sup>12</sup> CASA believes that this impact is negated considerably by the fact that many current operators have already upgraded to these higher standards to meet current contractual requirements.

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- requirement for MT operators to submit an operational flight plan in accordance with their formal procedures
- requirements for specific HMT communication ( if necessary for the operation)
- relief considerations for MT operating minima, including the use of Night Vision Imaging Systems (NVIS) or enhanced visions systems
- relief considerations for HMT performance requirements during specified stages of the flight
- relief considerations for AMT performance requirements during specified stages of the flight
- additional compliance for MT crew requirements
- relief considerations for MT medical passenger and personnel briefing in situations when they are unable to receive such briefings
- additional compliance for provision of MT operating base facilities
- additional considerations for managing fatigue.

## 4 Implementation and review

CASA will assess the impact of the proposed changes on operators and pilots to ensure an adequate timeframe is given for implementation. CASA proposes that the transition period will coincide with that of the operational CASRs, to ensure operators have revised their business models and procedures in respect to these changes. This being the case, a preliminary date for the proposed rules to come into effect is **first quarter 2015**. Please note this date may change, depending on the time taken to have the draft rules signed, registered and set to commence.

The CASRs affected by this change (i.e. Parts 119, 121, 133 and 135 of CASR) are currently under development and will ultimately replace both the CARs and Civil Aviation Orders (CAOs). The proposed policy outlined in this NPRM, subject to industry consultation on the required tailoring for MT flights, will be reflected in the relevant CASRs when made.

CASA will monitor and review the new rules on an ongoing basis during the implementation and transition phases. Thereafter, monitoring and review would be conducted as prescribed by Government guidelines.

## 5 NPRM Response Form

### Regulation of aeroplane and helicopter 'ambulance function' flights as Air Transport operations

**Please complete your response by 27 September 2013  
and return it by one of the following means:**

**Post (no stamp required in Australia)**

CASA's Standards Development and Quality Assurance Branch  
Reply Paid 2005, Canberra ACT 2601, Australia

**E-mail (use the response format in this NPRM)**

nprm1304os@casa.gov.au

Please provide relevant information below and indicate your acceptance or otherwise of the options presented in this NPRM by ticking [✓] the appropriate boxes.

#### Your details

Your name: \_\_\_\_\_ ARN\* (if known): \_\_\_\_\_

Organisation: \_\_\_\_\_ ARN\* (if known): \_\_\_\_\_

\* Aviation Reference Number, usually your CASA-issued licence or certificate number

Address: \_\_\_\_\_

Your telephone number#: \_\_\_\_\_

# optional, to enable the Project Manager to contact you if necessary

Do you consent to having your name published as a respondent to this NPRM? YES  NO

Signed:

Date:

Key change proposal

CASA invites you to advise your comments on the subject matter in this NPRM by indicating your preference by ticking [✓] the appropriate box and commenting below:

**Key Proposal: Helicopter and aeroplane medical transport operations will be moved into the air transport classification and authorised by an AOC issued in accordance with Part 119 of CASR. Medical transport operations will be subject to the requirements of the applicable air transport regulation (i.e. Parts 121, 133 or 135 of CASR) and any overarching regulations from Part 91 of CASR, as applicable.**

[ ] proposal is acceptable without change

[ ] proposal is not acceptable under any circumstances

[ ] changes would make the proposal acceptable (please provide details below)

Comments or suggested changes (including an estimate of additional costs/impacts, if applicable):

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Additional information is available from:

**Dale South**

**CASR Part 133 and 138 Project Leader**

**Post (no stamp required in Australia)**

Reply Paid 2005

Flight Operations and Flight Crew Licencing Standards

Civil Aviation Safety Authority

Canberra ACT 2601, Australia

**Email**

[dale.south@casa.gov.au](mailto:dale.south@casa.gov.au)

**Telephone**

Australia 07 3144 7526 or

131 757 (for the cost of a local call)

International +61 7 3144 7526