



**AERONAUTICAL SAFETY**  
**HSE BULLETIN – N. 2020-01**  
**Date: 20/03/2020**

**NOTE: This Safety Bulletin reports information sensitive to HSE (Health, Safety and Environment).**

**Object:**                   **Coronavirus.**

- References:**
- a) Leonardo - Information Letter No.: GEN-20-082 - Coronavirus 'SARS-CoV-2' Infections – Cleaning advices - March 05th, 2020.
  - b) Airbus Helicopters – Information Notice No. 3476-I-12 - SERVICING – Disinfection of the Helicopter Interior and the External handles – 10/03/2020
  - c) EASA SD No.: 2020-01 - Operational measures to prevent the spread of Coronavirus 'SARS-CoV-2' infection - 16 March 2020.  
<https://ad.easa.europa.eu/sd-docs/page-1>
  - d) ECDC (European Centre for Disease Prevention and Control) - Infection prevention and control for COVID-19 in healthcare settings – March 2020.  
<https://www.ecdc.europa.eu/en/publications-data/infection-prevention-and-control-covid-19-healthcare-settings>
  - e) ECDC (European Centre for Disease Prevention and Control) - Interim guidance for environmental cleaning in non-healthcare facilities exposed to SARS-CoV-2 – 18 February 2020.  
<https://www.ecdc.europa.eu/en/publications-data/interim-guidance-environmental-cleaning-non-healthcare-facilities-exposed-2019>
  - f) WHO (World Health Organization) - Rational use of personal protective equipment for coronavirus disease 2019 (COVID-19) – 27 February 2020.  
[https://apps.who.int/iris/bitstream/handle/10665/331215/WHO-2019-nCov-IP-CPPE\\_use-2020.1-eng.pdf](https://apps.who.int/iris/bitstream/handle/10665/331215/WHO-2019-nCov-IP-CPPE_use-2020.1-eng.pdf)
  - g) WHO (World Health Organization) - Water, sanitation, hygiene and waste management for the COVID-19 virus – 03 March 2020.  
<https://www.who.int/publications-detail/water-sanitation-hygiene-and-waste-management-for-covid-19>
  - h) [Please check your National rules and regulations]



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**Distribution** All helicopter operators / organisations.

**Applicability:** All helicopter operators / organisations.

**Description:** **NOTE: The following information comes from European and international health organisations, unless otherwise indicated.**

**This Safety Bulletin does not intend to replace these relevant organisations. In case of doubts, updates or conflicting information, please refer to their indications and web-sites.**

**NOTE 2: National health bodies may adopt different and adapted definitions and indications. Please refer to your national health department for specific national information.**

**NOTE 3: Scientific community ongoing researches on Coronavirus are continuously increasing their knowledge about the virus. Please keep informed through the official sources (see references).**

## **INTRODUCTION**

This Safety Bulletin has been designed to provide consistent information to the operators regarding the pandemic emergency of Coronavirus. This SB is meant to be divulged to the operator / organisation personnel.

This document reports information from European and international institutional sources, in particular from the Who (World Health Organization), the European Centre for Disease Prevention and Control (ECDC), EASA, Leonardo Helicopters and Airbus Helicopters, updated at the date of this SB's issuance.

## **INFORMATION SOURCES**

The situation regarding the spread and prevention of Coronavirus is continuously monitored and updated by the institutional bodies, for this reason the information may vary. During this period, a lot of news is spread from different sources. Information is essential and all staff should continue to remain informed. Unfortunately, there is also some information, not supported by official sources, which can lead to confusion or unfounded alarmism.

**It is strongly suggested that official bodies should be continuously referred to and checked for correct information and for personal protection and prevention indications.**

Here are some of the reference institutional sites:

- WHO (World Health Organization) - <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
- ECDC (European Centre for Disease Prevention and Control) - <https://www.ecdc.europa.eu/en>

## **NOMENCLATURE**

Coronaviruses are a family of viruses with positive filament RNA, with a crown-like appearance, known to cause diseases ranging from the common cold to more serious diseases such as Middle Eastern Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS).

The current Coronavirus is called "New Coronavirus (nCoV)" since it is a new strain of coronavirus that has not previously been identified in humans.

The "New Coronavirus (nCoV)" virus has been called "Severe Acute Respiratory Syndrome Coronavirus 2" (SARS-CoV-2) by the International Committee on Taxonomy of



Viruses (ICTV). SARS-CoV-2 belongs to the same family of severe acute respiratory syndrome (SARS) virus, but it is not the same virus, that is why it was given the suffix "2". The Disease caused by the new Coronavirus has been named by the Director-General of OMS, Tedros Adhanom Ghebreyesus, "COVID-19" (where "CO" stands for crown, "VI" for virus, "D" for disease and "19" indicates the year in which it occurred).

### **SYMPTOMS**

The most common symptoms are fever, fatigue and dry cough. Some patients may have soreness and muscle aches, nasal congestion, runny nose, sore throat or diarrhea. These symptoms are generally mild and begin gradually. In severe cases, infection can cause pneumonia, severe acute respiratory syndrome, kidney failure and even death.

### **PEOPLE MOST AT RISK**

Older people with underlying conditions, such as hypertension, heart problems or diabetes, and immunodepressed patients (congenital or acquired or for treatment with immunosuppressant drugs, transplanted) are more likely to develop severe forms of the disease.

In addition, people living or traveling to areas at risk of new coronavirus infection or people who meet the criteria of close contact with a confirmed or probable case of COVID-19 are at risk.

The geographical areas at risk of infection with new coronavirus are those where there is community transmission, local or widespread, of SARS-CoV-2. These must be differentiated from areas where there are only imported cases.

### **INCUBATION**

The incubation period represents the period of time between contagion and the development of clinical symptoms. It is currently estimated between 2 and 11 days, and up to a maximum of 14 days.

### **TRANSMISSION**

The new Coronavirus is a respiratory virus that spreads mainly through close contact with a sick person. The primary way are the breath droplets of infected people, for example through:

- saliva, coughing and sneezing
- direct contacts with infected persons
- hands, for example by touching your mouth, nose or eyes with contaminated hands (not yet washed)

In rare cases the infection can occur through fecal contamination.

Normally respiratory diseases are not transmitted with food, which must be manipulated respecting good hygiene practices and avoiding contact between raw and cooked foods.

Studies are underway to better understand how the virus is transmitted.

Since transmission can occur through contaminated objects, it is always a good idea to prevent infections, including respiratory, by washing frequently and thoroughly the hands after touching potentially contaminated objects and surfaces and before touching face, eyes and mouth.

### **DEFINITION OF CLOSE CONTACT**

[NOTE: Definition may be different from nation to nation and may change over time]

The European Centre for Disease Prevention and Control defines close contact:



- a person living in the same house with a case of COVID-19;
- a person who has had direct physical contact with a case of COVID-19 (e.g. handshake);
- a person who has had unprotected direct contact with the secretions of a case of COVID-19 (e.g. touching used paper handkerchiefs with bare hands);
- a person who has had direct (face-to-face) contact with a case of COVID-19, at a distance of less than 2 meters and longer than 15 minutes;
- a person who has been in a closed environment (e.g. classroom, meeting room, hospital waiting room) with a case of COVID-19 for at least 15 minutes, less than 2 meters away;
- a health care provider or other person who provides direct assistance to a case of COVID-19 or laboratory staff handling samples of a COVID-19 case without the use of the recommended PPE or through the use of ineligible PPE;
- a person who has travelled by plane in the two adjacent seats, in any direction, of a case of COVID-19, fellow passengers or servicemen and crew members working in the section of the aircraft where the index case was sitting (if the index case has a severe symptoms or has made any movements within the aircraft, resulting in greater exposure of the passengers, consider as “close contacts” all passengers sitting in the same section of the aircraft or in the whole plane).

The epidemiological link may have occurred within a period of 14 days before or after the manifestation of the disease with the case under examination.

#### **INFECTION BY PERSONS THAT DO NOT HAVE SYMPTOMS (ASYMPTOMATIC)**

According to the data currently available, symptomatic people are the most frequent cause of spread of the virus. WHO considers infrequent the new Coronavirus infection before symptoms develop.

#### **PREVENTION**

The new coronavirus is a respiratory virus that spreads mainly through contact with the breath droplets of infected people, for example when sneezing or coughing or blowing their noses. It is therefore important that sick people apply hygiene measures such as sneezing or coughing in a handkerchief or with their elbows flexed and throw the handkerchiefs used in a closed basket immediately after use, and wash their hands frequently with soap and water or using alcoholic solutions.

You should wash your hands often and thoroughly with soap and water for at least 60 seconds. If no soap and water is available, you can also use an alcohol-based hand sanitizer (alcohol concentration of at least 60%).

Stay informed about the spread of the outbreak, available on [the WHO website](#) and take the following personal protection measures [NOTE: Please verify your national laws and rules]:

- stay at home, leave home only for work needs, health reasons and needs
- wash your hands often. It is recommended to provide hydrolytic solutions for hand washing;
- avoid close contact with people suffering from acute respiratory infections;
- avoid hugs and handshakes;
- maintain, in social contacts, an interpersonal distance of at least one meter;
- respiratory hygiene (sneezing and/or coughing in a handkerchief avoiding contact of the hands with respiratory secretions);
- avoid the promiscuous use of bottles and glasses, especially during sports;



- don't touch your eyes, nose and mouth with your hands;
- cover your mouth and nose if you sneeze or cough;
- do not take antiviral drugs and antibiotics unless prescribed by your doctor;
- clean surfaces with chlorine-based or alcohol-based disinfectants;
- use the mask only if you suspect you are sick or if you care for sick people.

If you have fever, cough or breathing difficulties and suspect that you have been in close contact with a person with Covid-19 respiratory disease: stay indoors, don't go to the emergency room or medical practices but call your GP, pediatrician or medical examiner on the phone. Use emergency numbers only if absolutely necessary.

Normally, respiratory diseases are not transmitted with food, which must be manipulated while respecting good hygiene practices and avoiding contact between raw and cooked foods.

### **PROTECTION**

The World Health Organization recommends wearing a mask [surgical mask] only if you suspect you have contracted the new Coronavirus and have symptoms such as coughing or sneezing or if you are caring for a person with suspected new Coronavirus infection.

The use of the mask helps to limit the spread of the virus but must be adopted in addition to other measures of respiratory and hand hygiene.

In fact, it is possible that the use of masks may even increase the risk of infection due to a false sense of security and increased contact between hands, mouth and eyes.

It is not useful to wear multiple overlapping masks. The rational use of masks is important to avoid unnecessary waste of valuable resources.

To put and remove the mask:

- before wearing the mask, wash your hands with soap and water or with an alcoholic solution;
- cover your mouth and nose with a mask making sure it's not broken and fits well in your face;
- avoid touching the mask while wearing it, if you touch it, wash your hands;
- When it gets damp, replace it with a new one and don't reuse it; as it is mono-use masks;
- Remove the mask by taking it from the elastic and do not touch the front of the mask; immediately throw it in a closed bag and wash your hands.

### **CORONAVIRUS SURVIVABILITY**

Preliminary information suggests that the virus may survive a few hours, although it is still being studied. The use of simple disinfectants is able to kill the virus by nullifying its ability to infect people, for example disinfectants containing alcohol (ethanol) at 75% or chlorine at 1% (bleach).

It is not certain how long the virus that causes COVID-19 survives on surfaces, but it seems likely to behave like other coronaviruses. A recent review of the survival of human coronaviruses on surfaces found great variability, ranging from 2 hours to 9 days. Survival time depends on a number of factors, including surface type, temperature, relative humidity and the specific strain of the virus. The same review also found that effective inactivation could be achieved within 1 minute using common disinfectants, such as 70% ethanol or sodium hypochlorite.



### RECEIVING PARCELS FROM OTHER COUNTRIES

The WHO has stated that people who receive packages are not at risk of contracting the new Coronavirus, especially in relation to exposure to different temperatures and conditions.

### USING PERSONAL PROTECTION DEVICES

Following are the indications of the World Health Organization (WHO) – Ref. (f).

[NOTE: HEMS and some public services may be an important asset for the nation. Pilots and technicians, as well as aviation specialised personnel, are limited in number, and in case even a few of them are not able to perform their duties (e.g. because infected) it will impair part of the national emergency asset (e.g. helicopters grounded, operative bases closed, etc.). Consider reducing the exposition risk of this personnel beyond the basic indications of the international health organisations].

*Recommended type of personal protective equipment (PPE) to be used in the context of COVID-19 disease, according to the setting, personnel and type of activity<sup>a</sup>.*

Setting	Target personnel or patients	Activity	Type of PPE or procedure
<b>Healthcare facilities</b>			
<b>Inpatient facilities</b>			
Patient room	Healthcare workers	Providing direct care to COVID-19 patients.	Medical mask Gown Gloves Eye protection (goggles or face shield).
		Aerosol-generating procedures performed on COVID-19 patients.	Respirator N95 or FFP2 standard, or equivalent. Gown Gloves Eye protection Apron
	Cleaners	Entering the room of COVID-19 patients.	Medical mask Gown Heavy duty gloves Eye protection (if risk of splash from organic material or chemicals). Boots or closed work shoes
	Visitors <sup>b</sup>	Entering the room of a COVID-19 patient	Medical mask Gown Gloves
Other areas of patient transit (e.g., wards, corridors).	All staff, including healthcare workers.	Any activity that does not involve contact with COVID-19 patients.	No PPE required



Triage	Healthcare workers	Preliminary screening not involving direct contact <sup>e</sup> .	Maintain spatial distance of at least 1 m. No PPE required
	Patients with respiratory symptoms.	Any	Maintain spatial distance of at least 1 m. Provide medical mask if tolerated by patient.
	Patients without respiratory symptoms.	Any	No PPE required
Laboratory	Lab technician	Manipulation of respiratory samples.	Medical mask Gown Gloves Eye protection (if risk of splash)
Administrative areas	All staff, including healthcare workers.	Administrative tasks that do not involve contact with COVID-19 patients.	No PPE required
<b>Outpatient facilities</b>			
Consultation room	Healthcare workers	Physical examination of patient with respiratory symptoms.	Medical mask Gown Gloves Eye protection
	Healthcare workers	Physical examination of patients without respiratory symptoms.	PPE according to standard precautions and risk assessment.
	Patients with respiratory symptoms.	Any	Provide medical mask if tolerated.
	Patients without respiratory symptoms.	Any	No PPE required
	Cleaners	After and between consultations with patients with respiratory symptoms.	Medical mask Gown Heavy duty gloves Eye protection (if risk of splash from organic material or chemicals). Boots or closed work shoes



Waiting room	Patients with respiratory symptoms.	Any	Provide medical mask if tolerated.  Immediately move the patient to an isolation room or separate area away from others; if this is not feasible, ensure spatial distance of at least 1 m from other patients.
	Patients without respiratory symptoms.	Any	No PPE required
Administrative areas	All staff, including healthcare workers.	Administrative tasks	No PPE required
Triage	Healthcare workers	Preliminary screening not involving direct contact.	Maintain spatial distance of at least 1 m. No PPE required
	Patients with respiratory symptoms.	Any	Maintain spatial distance of at least 1 m. Provide medical mask if tolerated.
	Patients without respiratory symptoms.	Any	No PPE required
<b>Community</b>			
Home	Patients with respiratory symptoms.	Any	Maintain spatial distance of at least 1 m. Provide medical mask if tolerated, except when sleeping.
	Caregiver	Entering the patient's room, but not providing direct care or assistance.	Medical mask
	Caregiver	Providing direct care or when handling stool, urine or waste from COVID-19 patient being cared for at home.	Gloves Medical mask Apron (if risk of splash)





	Healthcare workers	Providing direct care or assistance to a COVID-19 patient at home	Medical mask Gown Gloves Eye protection
Public areas (e.g., schools, shopping malls, train stations).	Individuals without respiratory symptoms	Any	No PPE required
<b>Points of entry</b>			
Administrative areas	All staff	Any	No PPE required
Screening area	Staff	First screening (temperature measurement) not involving direct contact <sup>c</sup> .	Maintain spatial distance of at least 1 m. No PPE required
	Staff	Second screening (i.e., interviewing passengers with fever for clinical symptoms suggestive of COVID-19 disease and travel history).	Medical mask Gloves
	Cleaners	Cleaning the area where passengers with fever are being screened.	Medical mask Gown Heavy duty gloves Eye protection (if risk of splash from organic material or chemicals). Boots or closed work shoes
Temporary isolation area	Staff	Entering the isolation area, but not providing direct assistance.	Maintain spatial distance of at least 1 m. Medical mask Gloves
	Staff, healthcare workers	Assisting passenger being transported to a healthcare facility.	Medical mask Gown Gloves Eye protection
	Cleaners	Cleaning isolation area	Medical mask Gown Heavy duty gloves Eye protection (if risk of splash from organic material or chemicals). Boots or closed work shoes



Ambulance or transfer vehicle	Healthcare workers	Transporting suspected COVID-19 patients to the referral healthcare facility.	Medical mask Gowns Gloves Eye protection
	Driver	Involved only in driving the patient with suspected COVID-19 disease and the driver's compartment is separated from the COVID-19 patient.	Maintain spatial distance of at least 1 m. No PPE required
		Assisting with loading or unloading patient with suspected COVID-19 disease.	Medical mask Gowns Gloves Eye protection
		No direct contact with patient with suspected COVID-19, but no separation between driver's and patient's compartments.	Medical mask
	Patient with suspected COVID-19 disease.	Transport to the referral healthcare facility.	Medical mask if tolerated
	Cleaners	Cleaning after and between transport of patients with suspected COVID-19 disease to the referral healthcare facility.	Medical mask Gown Heavy duty gloves Eye protection (if risk of splash from organic material or chemicals). Boots or closed work shoes
<b>Special considerations for rapid response teams assisting with public health investigations<sup>d</sup></b>			
<b>Community</b>			
Anywhere	Rapid response team investigators.	Interview suspected or confirmed COVID-19 patients or their contacts.	No PPE if done remotely (e.g., by telephone or video conference).  Remote interview is the preferred method.



		In-person interview of suspected or confirmed COVID-19 patients without direct contact.	<p>Medical mask          Maintain spatial distance of at least 1 m.</p> <p>The interview should be conducted outside the house or outdoors, and confirmed or suspected COVID-19 patients should wear a medical mask if tolerated.</p>
		In-person interview with asymptomatic contacts of COVID-19 patients.	<p>Maintain spatial distance of at least 1 m.          No PPE required</p> <p>The interview should be performed outside the house or outdoors. If it is necessary to enter the household environment, use a thermal imaging camera to confirm that the individual does not have a fever, maintain spatial distance of at least 1 m and do not touch anything in the household environment.</p>

<sup>a</sup> In addition to using the appropriate PPE, frequent hand hygiene and respiratory hygiene should always be performed. PPE should be discarded in an appropriate waste container after use, and hand hygiene should be performed before putting on and after taking off PPE.

<sup>b</sup> The number of visitors should be restricted. If visitors must enter a COVID-19 patient's room, they should be provided with clear instructions about how to put on and remove PPE and about performing hand hygiene before putting on and after removing PPE; this should be supervised by a healthcare worker.

<sup>c</sup> This category includes the use of no-touch thermometers, thermal imaging cameras, and limited observation and questioning, all while maintaining a spatial distance of at least 1 m.

<sup>d</sup> All rapid response team members must be trained in performing hand hygiene and how to put on and remove PPE to avoid self-contamination.



## AIRCRAFT CLEANING

Following is an excerpt from Leonardo Helicopters' Information Letter on helicopter cleaning [ref. b)]. **[Refer also to the Airbus Helicopters – Information Notice in ref. b)]**

*With reference also to EASA SIB 2020-02 and ECDC Technical Report “Interim guidance for environmental cleaning in non-healthcare facilities exposed to SARS-CoV-2” [rif. e)], it is worth to highlight that in order to minimize the risk of spreading COVID-19 “[...] cleaning with water and household detergents and use of common disinfectant products should be sufficient for general precautionary cleaning”.*

*For this reason, based on Operators common practice, especially in EMS environment, please consider that commercial products, including those reported in Annex A (but not limited to), can be taken into consideration for cleaning and disinfection for helicopter interiors.*

*LH suggests to increase the cleaning frequency based upon the aircraft usage on operations that may have an increased probability of contamination; for such application approaches, it is hereby suggested to keep all precautionary actions to protect the health of cleaning personnel and to all specific prescriptions that can be submitted by national CAAs.*

*In addition, based on the experience of previous phenomena linked to coronaviruses, specific agents can be considered eligible for decontamination actions. The use of such antimicrobial agents (following the minimum requirements in terms of concentration reported into Annex B) has been demonstrated to minimize the effects of possible contamination.*

*Please consider to refer also to each product technical data sheet for further information on the usage method as allowed and respect an adequate time to allow all treated parts to dry completely.*

### ANNEX A

<b>Name</b>	<b>Supplier</b>	<b>Notes</b>
<i>Dismozon Pur</i>	<i>Bode Chemie company (Hamburg - DE)</i>	<i>Oxygen-active disinfectant cleaner - wide range of material compatibility</i>
<i>Minutil</i>	<i>Ecolab (MuttENZ - CH)</i>	<i>Hospital usage for surgical suite and Ambulances disinfection</i>
<i>Incidur</i>	<i>Draeger Safety Co. (Lübeck - DE)</i>	<i>Hospital usage for surgical suite and Ambulances disinfection</i>
<i>Dialzima Plus</i>	<i>Mondial snc (Padua - IT)</i>	<i>Hospital usage for Ambulances disinfection</i>
<i>Fenocid</i>	<i>Mondial snc (Padua - IT)</i>	<i>Hospital usage for Ambulances disinfection</i>
<i>Icepur</i>	<i>IC Products SA (Minusio CH).</i>	<i>Used in the medical sector, in laboratories, in the food industry</i>



ANNEX B

<i>Antimicrobial agent</i>	<i>Concentration</i>	<i>Coronaviruses tested</i>
<i>Ethanol</i>	<i>70%</i>	<i>HCoV-229E, MHV-2, MHV-N, CCV, TGEV</i>
<i>Sodium hypochlorite</i>	<i>0.1–0.5% 0.05–0.1%</i>	<i>HCoV-229E SARS-CoV</i>
<i>Povidone-iodine</i>	<i>10% (1% iodine)</i>	<i>HCoV-229E</i>
<i>Glutaraldehyde</i>	<i>2%</i>	<i>HCoV-229E</i>
<i>Isopropanol</i>	<i>50%</i>	<i>MHV-2, MHV-N, CCV</i>
<i>Benzalkonium chloride</i>	<i>0.05%</i>	<i>MHV-2, MHV-N, CCV</i>
<i>Sodium chlorite</i>	<i>0.23%</i>	<i>MHV-2, MHV-N, CCV</i>
<i>Formaldehyde</i>	<i>0.7%</i>	<i>MHV-2, MHV-N, CCV</i>

**Suggested operating procedures:**

**NOTE 1:** This section reports SUGGESTIONS for flight operations to, from or within a COVID-19 critical area.

**NOTE 2:** The following SUGGESTED operating procedures are generally more restrictive than the indications of the international health organisations in order to reduce the risk exposition for pilots, technicians and aviation specialised personnel with the aim of safeguarding the necessary national emergency or the public service assets.

<b>Setting</b>	<b>Target personnel or patients</b>	<b>Activity</b>	<b>Type of PPE or procedure</b>
HEMS Heli ambulance	Helicopter	Transporting suspected or confirmed COVID-19 patients to the referral healthcare facility.	Flight cockpit not separated from sanitary cabin with rigid and complete bulk-head.  Missions not feasible.



			<p>Flight cockpit shall be separated from sanitary cabin with rigid and complete bulkhead.</p> <p>Consider the use of biocontainment stretcher approved for the use in helicopter.</p>
	Healthcare workers	Transporting suspected or confirmed COVID-19 patients to the referral healthcare facility.	<p>Medical mask Gowns Gloves Eye protection</p>
	Pilots and/or TCM in the flight cockpit not involved in assisting the patient	Transporting suspected or confirmed COVID-19 patients to the referral healthcare facility.	<p>Maintain spatial distance of at least 1 m upwind. Remain in the cockpit with all openings closed when with loading or unloading patient. Facial mask FFP2 or FFP3 Gloves</p>
	Pilot involved in assisting the patient and TCM in the sanitary cabin	Assisting with loading or unloading patient with suspected COVID-19 disease.	<p>Consider missions without TCM or any non-essential personnel.</p> <p>Medical mask Gowns Gloves Eye protection</p> <p>NOTE: PPE may not allow safe flight operations. Missions not feasible.</p>



	Patient with suspected or confirmed COVID-19 disease.	Transport to the referral healthcare facility.	Medical mask if tolerated.  Use of disposable sheet under and around the patient.  Consider the use of biocontainment stretcher approved for the use in helicopter.
	Cleaners		Cleaning and sanitation after and between transport.  Medical mask Gown Heavy duty gloves Eye protection (if risk of splash from organic material or chemicals). Boots or closed work shoes
HEMS  Heli ambulance	Healthcare workers	Transporting not suspected COVID-19 patients to the referral healthcare facility.	Facial mask FFP2 or FFP3 Gloves
	Pilots and TCM		Facial mask FFP2 or FFP3 Gloves
	Patient without suspected COVID-19 disease.	Transport to the referral healthcare facility.	Medical mask if tolerated
	Cleaners		Cleaning and sanitation every 24 hours.  Medical mask Gown Heavy duty gloves Eye protection (if risk of splash from organic material or chemicals). Boots or closed work shoes



Specialised operations (SPO)	Operator's pilots and crew	Office work Flight operations	In flight use the same precautions used in the office. Suggested: Medical mask Maintain spatial distance of at least 1 m.
	Client's crew or external passengers	Whenever working together	Medical mask to all Maintain spatial distance of at least 1 m.
	Cleaners		Cleaning and sanitation every 24 hours in case of flight activity.  Medical mask Heavy duty gloves Eye protection (if risk of splash from chemicals).
CAT – Passenger transport - Helicopter	Operator's pilots and crew	Office work Flight operations	In flight without passengers use the same precautions used in the office. Suggested: Medical mask Maintain spatial distance of at least 1 m.
			In flight with passengers: Medical mask Maintain spatial distance of at least 1 m as much as possible.
	Passengers knowing each other	In passenger cabin	Let them decide. Suggested: Medical mask Seat as much apart as possible.
	Passengers not knowing each other	In passenger cabin	Medical mask Seat as much apart as possible.





	Passenger with symptoms of: <ul style="list-style-type: none"> <li>- Fever</li> <li>- Cough</li> <li>- Respiratory problems</li> </ul>		Consider denying embarkation.  Flight cabin shall have any mean of separation from passenger cabin.  Operator's crew: Facial mask FFP2 or FFP3 Gloves  Passengers: Medical mask
	Cleaners		Cleaning and sanitation every 24 hours in case of flight activity.  Medical mask Heavy duty gloves Eye protection (if risk of splash from chemicals).
School (ATO)	Operator's instructors and examiners	Office work Flight operations	In flight without students or passengers use the same precautions used in the office. Suggested: Medical mask Maintain spatial distance of at least 1 m.
			In flight with students or passengers: Medical mask Maintain spatial distance of at least 1 m as much as possible.
	Student and passengers	In flight	Medical mask.



	Student or passenger with symptoms of: <ul style="list-style-type: none"> <li>- Fever</li> <li>- Cough</li> <li>- Respiratory problems</li> </ul>		Consider suspending the course or cancelling the flight.  Operator's instructor or examiner: Facial mask FFP2 or FFP3 Gloves  Student or passengers: Medical mask
	Cleaners		Cleaning and sanitation every 24 hours in case of flight activity.  Medical mask Heavy duty gloves Eye protection (if risk of splash from chemicals).
CAT – Passenger transport - Airplane	General		Follow specific national and international rules and airport procedures
	Operator's pilots and crew	Office work Flight operations	In flight without passengers use the same precautions used in the office. Suggested: Medical mask Maintain spatial distance of at least 1 m.
			In flight with passengers: Medical mask Maintain spatial distance of at least 1 m as much as possible.
	Passengers knowing each other	In passenger cabin	Let them decide. Suggested: Medical mask Seat as much apart as possible.
	Passengers not knowing each other	In passenger cabin	Medical mask Seat as much apart as possible.



	Passenger with symptoms of: - Fever - Cough Respiratory problems		Consider denying embarkation.  Flight cabin shall have any mean of separation from passenger cabin.  Operator's crew: Facial mask FFP2 or FFP3 Gloves  Passengers: Medical mask
	Cleaners		Cleaning and sanitation every 24 hours in case of flight activity.  Medical mask Heavy duty gloves Eye protection (if risk of splash from chemicals).

**IN CASE OF POSITIVITY OF A TRANSPORTED PATIENT/PASSENGER/CREW MEMBER (BY THE HEAD OFFICE)**

- Immediately notify the event to the national Health Service Authority.
- Follow the instructions of the national Health Service Authority.
- Immediate quarantine all crew or follow national rules.
- Sanitise the aircraft, base of operations, service cars and any facilities used by the crew after transport. Notify those responsible for external facilities (hotels, restaurants, etc.).
- Inform all [Company] staff and other parties who have come into contact with the crew (health personnel, fire guard, airport facilities, etc.).
- Fill out a safety report and send it to the Safety Manager and HSE manager.

**PROCEDURE TO TRANSPORT A SUSPECT OR CONFIRMED POSITIVE COVID-19 PATIENT (WITH HELICOPTER WITH RIGID AND COMPLETE BULKHEAD SEPARATION BETWEEN FLIGHT COCKPIT AND PASSENGER CABIN)**

1. Suitable helicopters are considered as such if they have complete and non-partial rigid separation of the cabin compartment, even if not sealed.
2. Preparation of the helicopter:  
 All backpacks and objects not strictly necessary for the type of transfer and that normally find a place in the sanitary cabin must be disembarked from the helicopter before the flight, in order to minimize any contamination and the need sanitation. Surfaces that are not easily washed will be as far as possible covered with transparent films or other provisions.



3. Methods for sanitizing helicopters periodically and after transfer of infected.
  - Sanitization will take place upon return to base.
  - The medical staff will provide for sanitation of the passenger cabin. The operator will provide for sanitation of flight cockpit and aircraft externals.
  - Healthcare workers must be undressed outdoors or in ventilated rooms, separate from the office premises and must store contaminated clothing in a special container. Proper procedures shall be issued.
  - The medical passengers and the TCM or any other passenger, if embarked, will wear the proper PPE. Two pairs of gloves must be worn.
  - The helicopter's sanitary compartment must be ventilated as much as possible; it is absolutely forbidden to use compressed air.
  - HEMS helicopters shall be sanitised every 24 hours.
  - Sanitation shall be noted and signed by the cleaner.
  
4. Management and coordination procedures
  - The procedures for the preparation, use and disposal of PPE by health personnel must be clear and agreed.
  - Evidence of information and training to the medical personnel of the HEMS bases in the preparation, use, undressing of the devices and controlled disposal must be given.
  - Suitable rooms or open spaces for undressing at the end of the mission must be guaranteed to avoid contamination of the common premises of HEMS bases;
  - The personnel on board in the sanitary cabin will be limited to medical crew only.
  
5. Personal protective equipment
  - The proper separation of the flight cockpit from the passenger cabin is considered to be an adequate barrier. Anyway, the use of FFP2 or FFP3 masks, and gloves is recommended.
  - During disembarkation and embarkation of the patient, flight crew shall maintain a safe distance.