

Module

General Aviation Considerations in Planning the Aviation Industry's Recovery from COVID-19

Target audience

General Aviation Pilots, Fixed Base Operators, Flight Schools and Clubs, authorities, governments, airport staff.

Element

Overview

Brief description (Objective)

While a desire for uniform arrangements among different sectors of the aviation industry might be understandable, concepts for the industry's recovery from the COVID-19 pandemic vary between the air transport sector, with large numbers of passengers, and general aviation (GA), which operates in an environment that involves far smaller numbers of people. In some countries, health authorities have taken steps to minimise the risk of GA aircraft spreading the COVID contagion, and the vast majority of GA operators have complied with general rules and community standards without specific regulation.

General Aviation (GA) Flight Operations

- In keeping with its inherent flexibility, GA operations vary enormously in type and scale. The numbers of persons on board a GA flight can be two orders of magnitude less than the number of paying passengers carried on jet airline aircraft. This fact alone greatly reduces the public risk of contagion from GA operations, which range from recreational and some private flights, where the pilot or members of immediate family of the same domicile are on board, through to operations supporting business activities, which at times may involve unrelated persons.
- It is therefore not possible to prescribe one set of rules to cover all GA situations, however guidance to operators in planning and conducting their own operations is possible.
- Many GA pilots are not employees of the aircraft operator. Whilst formal employment-related health assessment measures might be appropriate for larger facilities, such as flight training colleges, they are not appropriate for owner-pilots whose use of the aircraft is for personal and business travel. Pilots already conduct a self-assessment of their health prior to flying and can adapt to COVID-specific guidance criteria without further regulation.
- Headsets and personal equipment should not be shared. For larger operations (say, more than 100 people present at a site), an isolation room for personnel who arrive with symptoms and a protocol for their removal may be appropriate.
- Non-contact electronic delivery and submission of flight briefing, and notification documentation should be preferred over in-person attendance and telephone methods.
- Many general aviation aircraft are able to accommodate COVID-safe flight seating and operations, which in many ways will be superior to what is achievable and economic in large passenger aircraft. For example, an

Australian tourism operator is able to economically utilise its Cessna Caravan aircraft at reduced capacity (nine persons plus one pilot) whilst maintaining one metre social distancing inside the aircraft cabin.

Public Health Corridor (PHC)

- One aspect of the recovery is the establishment of a public health corridor (PHC), intended to provide a safe means for people to access, arrive and depart from air transport service. The Council Aviation Recovery Task Force (CART) documents refer to guidance developed for cargo-only operations.
- For GA, the PHC should be envisaged as extending from the places and activities when a person arrives at an airport for a flight, until the person leaves the airport at the end of the operation. It is critical to recognise that this may, or may not, include a person traversing a hangar, airport terminal, fixed base operator (FBO), aero club, flight training school or external public area. Instead of focusing on the physical locations GA participants will pass through, attention should be directed to selectable and scalable measures that may be taken to keep the participants safe from infection, or from passing infection to others using appropriate risk management principles.
- GA flights do not generally use public airport terminals, or and many do not utilise FBO facilities. Many flights can start and end at the operator's own hangar or tie down facility on a private or public airport. In some situations, no other people, other than those making the flight will be present. Indeed, directing GA participants into a busy terminal or FBO for assessment would actually increase the risk of acquiring the virus in many situations. It should be for GA aircraft operators to determine the most appropriate ground facility by which participants gain access to the aircraft, subject to local security requirements. The PHC concept for GA is one of awareness and a series of processes, not necessarily involving a ground facility, determined by the operator, to minimise the risk of contagion.

General Aviation (GA) Aircraft Cleaning and Handling

- The treatment of GA aircraft following flight should be open to the individual operator; for example, an aircraft which is only flown by an individual owner and kept in a hangar does not require any additional cleaning unless it leaves that situation, say for maintenance; whilst an aircraft owned by an aero club should be cleaned after each change of pilot(s) and passengers.
- GA aircraft should carry an appropriate number of sanitising wipes for use at stopovers if necessary. Where unrelated parties are carried in the aircraft, face masks should be available for use if desired.
- Gloves should be worn by pilots during self-refuelling, and assisted refuelling, as far as possible, should be paid by card and performed without human contact between personnel.
- GA aircraft and avionics manufacturers have issued guidance for aircraft cleaning and disinfection, which should be observed by GA aircraft operators as necessary; but what is "necessary" depends on the nature of the operation, the number of persons carried, their relationship to each other and the state of public contagion at departure and destination.

Means for uniform implementation

- Collaborate with relevant authorities, aircraft owners, aero clubs and other aviation stakeholders for cost-effective solutions that protect the public.
- Simplified formalities by enabling contactless processes.
- Recognition that measures employed will vary by operator and type of operation.
- Use of existing guidance on social distancing and disease prevention and control.

<i>Module</i>	General Aviation – Resuming and Sustaining Operations
<i>Target audience</i>	General Aviation Pilots, Fixed Base Operators, Flight Schools and Clubs, authorities, governments, airport staff.
<i>Element</i>	FACTORS INVOLVED IN DECISION CRITERIA TO RESUME OPERATIONS:
<i>Brief description (Objective)</i>	<p>Resuming operations after shutdown due to the COVID-19 pandemic involves moving from risk “avoidance” to risk management. The decision entails accepting some level of risk and implementing steps to minimize impact to personnel, operations, and to the community at large. This section provides some thoughts to assist making the decision to open, and then offers suggestions on steps to open carefully while monitoring the operation for signs of sustained strength and health. Every individual and business will have specific circumstances and issues to consider, so the information provided here should not be considered definitive or exhaustive.</p> <p>Health risks from Coronavirus aren’t the only considerations. Rusty or lapsed pilots and dormant aircraft can be, by themselves, problematic. In combination they present an expanded risk to aviation safety, which must also be a factor in making operational decisions to open and sustain operations. Operators are encouraged to consider pilot and instructor proficiency and implement measures to mitigate the risks from degraded proficiency and idle aircraft.</p>
	<ul style="list-style-type: none"> • Determine your state and local guidance. Start by reviewing the ICAO COVID-19 Website for the most detailed and up to date information. State executive orders and health department guidance may be ambiguous leaving wide room for interpretation. With ambiguous guidance, decisions may vary within the same location by operators providing similar service. It is imperative to assess the available guidance and have clear rationale that you can articulate to your employees, clients, and local officials. Consider consulting with your attorney, your National Aviation Authority (NAA) and/or similar operators to gain consensus on interpretation of state and local guidelines. Open an ongoing channel to stay connected and share perspectives on the situation as it develops. • The question of “essential.” Some locations may still be under current guidance that only essential businesses can open. The definition of "essential" is often unclear. For example, some state executive orders define certain recreational activities as "essential" (including hiking, biking, canoeing, etc.), provided World Health Organization (WHO) social distancing guidelines can be met. Many States list flight instructors as essential critical infrastructure workers, which supports the idea that flying operations can be considered essential. Be aware that many times this guidance is advisory only and does not constitute a national directive or standard. Operations considered "non-recreational" that may meet the most stringent guidelines may include: <ul style="list-style-type: none"> ○ Flight reviews, IPCs, currency checks, and flights to meet proficiency requirements ○ Flight training leading to advanced ratings: CFI, CFI-I, Commercial, MEI ○ Training leading to an instrument rating where the pilot will fly the airplane for business or is training for a career as a professional pilot ○ Single pilot operations in pursuit of any of the ratings listed above • Assess and monitor local infection rates, death rates, and hospitalization rates. In the absence of clear local guidance, operators in areas with high or expanding infection and death rates should consider delaying operations until those rates-per-capita plateau as indicated by National Medical Authority. A flat or descending trend in the hospitalization rate may prove a strong leading indicator that will predict death rates. Infection rates and death rates are helpful to assess, though these metrics tend to be delayed and can vary

based on collection and reporting methods as well as timing and assessment criteria. Bottom line, these metrics should be flat or descending. If a rise in these rates appears, consider re-assessing your operation.

- **Assess the demographics of your operation** (percentage of high-risk people). Those at higher risk based on currently available information and clinical expertise include older adults and people of any age who have serious underlying medical conditions. Such conditions include lung disease, asthma, serious heart disease, compromised immune systems, severe obesity, and liver disease. Consider opening your operation in stages, at first excluding anyone known to be in a high-risk category until your processes are fully implemented and confidently effective. Frequently consult the National Medical Authority for high-risk persons.
- **Assess your facility and resources.** Your facility must allow social distancing standards and sterilization recommendations. Operations should resume only after a thorough review of procedures with employees, who must accept decisions from management in implementing and upholding new procedures.
- **Evaluate your insurance coverage.** Review with your insurance broker your applicable insurance coverages such as your Commercial General Liability (CGL) coverage to determine if you have coverage for COVID-19 events:

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Element

IMPLEMENTATION PROCEDURES, ONCE A DECISION IS MADE TO REOPEN

Brief description (Objective)

Prior to starting operations whether private flying or aero clubs and flight schools it is important to ensure the cleanliness of the facilities and the aircraft. As mentioned earlier not all measures will apply to all general aviation flights. Those flying solo or with their families that do not visit any public places would practice the same protection measures that they would if driving in their personal car. Aero clubs and flight schools will need to perform additional measures to ensure public health guidelines are carried out.

Facilities. Prior to re-opening, follow the [WHO guidelines](#) to ensure your entire facility is cleaned, sanitized, and configured to promote social distancing. WHO guidelines indicate seven days of facility closure (non-access) is sufficient to eliminate the risk of residual COVID-19 contamination. The following steps will offer added confidence for preparing facilities:

Pre-opening cleaning. Open doors and windows to circulate fresh air through the facility to the extent possible for at least 24 hours before cleaning. Clean the entire facility with emphasis on a walk-through to wipe each surface or object that is touched or handled with sanitary wipes or disinfectant under normal business operations.

Establish and educate staff on procedures that limit the need for facility access. Consider booking, dispatching, check-in, and payment programs that do not require facility access. Communicate that access is limited to specific operational needs, which must be listed in new operational procedures or specifically approved by management.

Establish controlled entry points. Stock each entry point with hand sanitizer, disinfectant wipes, and a method for checking body temperatures.

Post new procedures. Post new procedures prominently at entry points, briefing rooms, restrooms, and in common areas. Post signage reminding personnel to wash hands or use hand sanitizer frequently.

Reposition furniture. Limit seating and congregation areas to the minimum. Ensure at least six feet of separation between chairs. Close common congregation areas.

Position panels. Install clear plastic panels at the front desk and other fixed locations to prevent the spread of germs and viruses to/from other personnel.

Clean facilities. Establish policies to ensure facilities are cleaned thoroughly every day. Have on-scene personnel wipe hard surfaces twice a day.

Special considerations. Every facility will be different. Evaluate your environment to determine if there are unique factors that need to be addressed.

Aircraft. Prior to resuming flight operations, disinfect aircraft with area sprays, such as Lysol, while being careful to avoid overspray on avionics screens. Use disinfectant wipes on all areas accessed by hands: door latches, oil dipsticks, switches, levers, avionics buttons, yoke, throttles, door and ignition keys, etc. Consider "chair-flying" a mission from pre-flight to post-flight in each aircraft and use sanitizing wipes throughout. Establish the following procedures for operations:

Hand washing - All personnel must wash hands before entering and after leaving the aircraft.

Pre-flight wipes - Make sanitizing the aircraft part of the pre-flight and post-flight checklist. Remember external items like dipsticks, fuel caps, pitot covers, cowl plugs, keys, and more.

Headsets, hoods, other items - Do not share headsets, view-limiting devices, kneeboards, or pens and pencils. Require pilots to use their own items or assign such items permanently to specific pilots.

Sterile aircraft - Require removal of all material not specifically assigned for permanent placement in the aircraft. With emphasis on trash, water bottles, etc.

Sterile avionics - [Garmin offers suitable guidance](#) for sterilizing avionics. Solutions with ammonia should be avoided. Instead use solutions with up to 91% isopropyl alcohol. 70% isopropyl alcohol evaporates slower than 91% solutions, giving it more time to work, which might make it more effective in killing viruses and germs. Wipes, or spraying the solution on wipes is best to prevent saturation of the equipment to the extent moisture could seep behind the exterior surface.

Cockpit checklists - Establish checklists with protective surfaces and sanitize them before and after each flight. Implementing policies for use of electronic checklists in e-flight bags where appropriate can limit potential exposure.

Post-flight wipes - Require after each flight a wipe-down of any interior and exterior surfaces that were likely touched.

Gloves - Protective gloves should be considered optional. If used, encourage people to remember gloves only protect the hands inside them. Gloves can pick up and transmit germs and viruses, and any surface touched by them should be sanitized afterwards.

Safety of flight - Safety of flight must not be compromised. If these procedures conflict with the safety of any flight, encourage personnel to discontinue them, and report the flight and the situation to management.

Personnel. Human-to-human transfer is believed to be the most potent avenue for COVID-19 infection. Establish guidelines for personnel who may participate in operations and require them to acknowledge and sign the guidelines. Some criteria to consider:

Agreements. Require all who participate to sign an agreement to abide by new procedures and discuss with your attorney possible use of a waiver that acknowledges risk of operations under

Require daily signed certifications. (Commercial Operators only) - Maintain signed statements/certifications from personnel entering the facility that they have not experienced symptoms of COVID-19 or had a body temperature of over 100.4 degrees within the last 24 hours. Also include confirmation that they have not travelled internationally within the last two weeks or knowingly been in contact with anyone who has experienced COVID-19 symptoms. Symptoms include persistent cough, shortness of breath, fever, chills, muscle pain, recent loss of sense of taste or smell, and sore throat. Refer to the [WHO website](#) for more information about Coronavirus symptoms. Personnel must also confirm they have not flown with any other operation within the last 14 days.

Require temperature checks on first entry of the day. (Commercial Operators only) Every time someone enters the facility for the first time each day, they must not exhibit a body temperature over 100.4 degrees. If at any time throughout the day, while in the facility or conducting operations, personnel feel feverish or experience other symptoms, they must immediately report their status and depart the premises.

Masks. Consider requiring all personnel to wear masks upon entering the facility and while engaged in activities on the premises including inside and around aircraft.

Sick personnel. Require anyone who exhibits COVID-19 symptoms to notify a manager if onsite or, if off-site, email a manager/supervisor and follow up with a phone call providing:

- Date/time when symptoms appeared
- All visits to the facility (dates and times)
- Personnel they interacted with
- Facilities they entered, including exact rooms, chairs, etc. and equipment and items they touched or used (aircraft, keys, aircraft covers, POHs, notebooks, computers, storage cabinets, simulators, etc.)
- Their plans for regaining health (self-quarantine, hospital, etc.)

Means for uniform implementation

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SEQUENTIAL OPENING

Brief description (Objective)

Opening operations sequentially, beginning with lower health-risk operations, will allow monitoring of the effectiveness of operational procedures before full operations resume. **These actions are directed at commercial operators only and are not applicable to an individual flying their private aircraft.**

Considerations

- **Solo flight and/or single entity independent aircraft rentals.** From a health perspective (not an operational perspective), solo flights or flights involving single entities (families, etc.) involve the least amount of health risk. They can be conducted even under the most stringent controls and higher health risk scenarios. Approvals, aircraft dispatching and check-ins, and most interactions with instructors can be performed remotely. Risk of transmitting or receiving the virus during these operations is limited to physical transfer from surfaces, which the CDC seems to indicate to be low risk.
- **Dual instruction.** Dual instruction presents the highest risk due to the proximity of instructor and student. Mandating masks while in the aircraft can reduce the risks. Masks are being used throughout the country during dual flights without significant interference. Consider limiting students and instructors to assigned pairs to limit the possibility of expanded contagion. Instructors who fly with multiple students are the highest risk to become potential transmitters, therefore they must be hypervigilant to COVID-19 symptoms and must agree to limit their interactions during non-work activities.
- **Ground school.** Ground schools can increase the health risks due to a grouping of people within a confined area. Limit ground school to online platforms as much as possible. If in person school is necessary, limit classes to 10 people or numbers allowed by your state, maximize seat spacing to at least six feet and require masks for all attendees.

Ongoing Assessment

- **Continuous monitoring.** Constantly review the opening criteria in section one. As the situation changes, re-assess the risks and expand or and expand or roll back operations as necessary. Also be particularly vigilant to assure compliance with the processes that you have adopted.
- **Reported illness.** In the event any person engaged in the operation reports symptoms of COVID-19, immediate response is required. Evaluate whether a total shutdown is necessary or whether you may be able to isolate the affected people and equipment and continue operations.
 - Track the symptomatic person's contact and engagement throughout the operation: facilities, aircraft, equipment, and most importantly, personnel. Realize people are contagious before showing symptoms. Shutter facilities and aircraft that the infected person may have contacted. Return to the opening steps above to re-sanitize the environment and wait seven days to reopen.
 - Notify all personnel who came in contact with the facilities, aircraft, equipment, or the symptomatic person. Advise them to be vigilant for symptoms and to report any onset of symptoms to their medical providers and your operations manager. Prohibit anyone who came in contact with the infected person from accessing the facility or from using aircraft or equipment for 14 days.

Means for uniform implementation

- Collaborate with relevant authorities, and commercial operators for cost-effective solutions that protect the public.

- Simplified formalities by enabling contactless processes.
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