



## **ECAC ACC GUIDANCE NOTE ON CONDUCTING INVESTIGATIONS DURING A PANDEMIC**

### **Introduction**

The ongoing coronavirus pandemic has presented significant challenges to all aspects of life including the conduct of air accident investigations. Although aviation activity has reduced in some sectors, new risks have emerged as a direct result of the pressures being felt across the industry. Unsurprisingly, accidents and serious incidents continue to occur, and States are obliged under Annex 13 to the Chicago Convention to institute investigations and progress them as swiftly as possible.

During the coronavirus pandemic Safety Investigation Authorities (SIA) have found effective ways to continue their important work in a safe and appropriate manner. The purpose of this guidance note is to share approaches that have proven to be effective and present options that AIA may wish to consider during the current or any future pandemic.

Given that there is a plethora of official guidance on general working practices to minimise the risks of catching or spreading the coronavirus, this note will focus on air accident investigation-specific issues.

### **The challenge**

A pandemic presents two main challenges for the SIA: first, protecting the health of AIA staff and their families; and second, overcoming obstacles to normal ways of working (such as travel restrictions, limited scope for face-to-face meetings, reduced access to own and 3rd party facilities and resources, challenges maintaining effective communications).

Inevitably, measures which provide protection also impact to some degree on the ability to get the job done. An appropriate balance needs to be found, whilst taking into account the human factor that there is considerable variability between individuals' perceptions of, and acceptance of, the risk.

### **General approach**

ECAC AIA are well trained and equipped to operate in challenging and hazardous environments. They have found that during a pandemic, almost anything can be done; it may just need to be done in a different way. Most AIA have successfully adopted a conventional risk management approach: identifying the hazards, putting in place mitigations to minimise the risks, determining if the residual risk is acceptable, and making decisions accordingly. As the situation is constantly changing, an agile approach is required. And as many things take longer to accomplish, own and others' expectations need to be managed carefully.

### **Maintaining operational readiness**

The foremost and ongoing challenge is to maintain operational readiness. This section sets out some measures to consider during a pandemic in order to maintain operational readiness to respond to notification of an accident.

*Safe and secure base*

It is important to have a safe and secure base from which to launch and sustain investigations, even if some staff are working from home. Extensive guidance is available from other sources about control of access, sanitisation measures, social distancing measures, ventilation, wearing of face coverings etc – and there is no need to repeat the details here. Suffice to say the AIA should conduct a full risk assessment of its operating base, with particular attention to communal areas, and put in place measures to establish and maintain a 'covid-secure' workplace in accordance with government and World Health Organisation guidelines.

### *Fit and healthy staff*

In these difficult times, the provision of health and wellbeing support is more critical than ever. Some measures that AIA may wish to consider include: identifying and protecting those within the organisation who may be more vulnerable; avoiding unnecessary travel, particularly by public transport; facilitating access to healthcare resources; and ensuring their staff are designated as critical safety workers, with freedom to operate as required.

Clearly it is important that staff self-isolate if they develop any symptoms of the disease or following contact with someone affected, and report if they are not available for duty. Some AIA have found it useful to segregate staff into separate teams to limit mixing.

AIA should also consider how they would deal with an outbreak within the organisation. This would lead to a temporary reduction in the availability of staff for deployment, but it could also have much more serious consequences including support to staff with a life-threatening illness.

### *Communications and IT*

AIA have found that staff can do much of their work from home if they have dependable communications and information technology (IT) equipment, and access to IT support staff who can help resolve issues remotely. Many tools and techniques now exist to enable collaborative remote working and they are being used extensively by AIA. New ways of working have become commonplace across many normally office-based organisations and there is a great deal of open-source advice available. Additional care is required when dealing with sensitive issues to ensure they are conducted in a secure and confidential manner.

### *Equipment*

Several AIA require the 'go-team' to keep their deployment kit at home to enable deployment direct from there when responding to an accident. AIA are generally well equipped with appropriate personal protective equipment (PPE) for operations in the field in a hazardous environment. Additional stocks of consumables including decontamination products may be required. AIA may also wish to provide staff with basic face coverings and non-specialist PPE for travel and situations other than the accident site. However, teams must not compromise on using professional grade PPE on the accident site, even when such equipment is in short supply, due to the many different hazards that they may encounter.

### *Plans and procedures*

AIA should review their plans and procedures to see if they need adaption for investigations during a pandemic. This should include specific protocols, understood by all, for working in the office, in technical facilities, in the field and at home, as well as for travel.

### *Training*

A pandemic undoubtedly makes it more difficult to conduct practical and face-to-face training. However, on-line learning is unaffected, and both AIA and training organisations have found ways to run accident investigation courses and *ad hoc* training with a mix of face-to-face and on-line activities. Refresher training on hazard awareness and operating in hazardous environments is particularly pertinent, together with briefings on the risks posed by the

pandemic and any revised procedures to be followed. Integration and training of new staff is particularly challenging but can be achieved to some extent even during a pandemic.

## **Notification**

AIA must ensure they have robust communications (both systems and staff) in place 24/7 to receive occurrence notifications and coordinate their response with multiple agencies. Other States and interested parties must be notified expeditiously in accordance with Annex 13 protocols. This can be achieved, even when the office is closed during a pandemic, using mobile and IT enabled communications channels. Experience has shown that it is very important to test and check the system end-to-end as it is not acceptable for any notification calls to go unanswered.

## **Deployment / field phase**

### *Planning*

During a pandemic, planning and preparation is required more than ever to ensure a successful deployment, as there will be additional obstacles to overcome. Some contingency planning beforehand may be beneficial, such as identifying the travel resources that may be available. However, much will depend on the exact location and circumstances of the accident so specific deployment plans will have to be developed for each case at the time.

### *Go/no-go decision*

A thorough deployment-specific risk assessment should be conducted to help inform a go/no-go decision authorised at the appropriate level. This should be agreed by all participants, as individual personal circumstances may impact on team selection.

### *Facilitation*

There will be increased reliance on the host nation (State of Occurrence) to help facilitate the deployment of Accredited Representatives (Accreps) and Advisors from other States. The AIA may need to use its contacts and influence across government departments to help expedite the issuing of visas and get a quarantine exemption for the investigation team.

To avoid difficulty and friction in the busy time following an accident, AIA should try to get agreement in advance from the relevant authorities within their State that those engaged in accident investigation, including advisors and experts, will be recognised as critical safety workers exempt from travel restrictions and quarantine when arriving in or returning to the country.

### *Travel*

During a pandemic public transport travel options may be more limited than normal; private alternatives such as self-drive vehicles and aircraft charter may need to be considered. When planning a deployment, AIA should take into account the health risk en-route to the destination and the potential for increased levels of fatigue associated with sub-optimal travel arrangements.

Deploying personnel should be prepared for country-specific requirements such as carriage of additional travel and health documents. If proof of a negative Covid test is required, allow sufficient time to get the results before departure.

When travelling in shared use vehicles the normal precautions should apply such as wiping down controls and touch points with sanitising wipes. Consider imposing restrictions on the number of occupants but also consider the fatigue implications if deploying by vehicle over a protracted distance.

### *Accommodation and food*

During a pandemic, availability of suitable accommodation may be limited. It can be helpful to have prior agreement at a national level that investigators are critical safety workers who need to be supported. There may also be increased reliance on the local authorities to secure hotel or alternative accommodation. Access to food may also be challenging, particularly at the unsocial hours that investigation teams often need feeding. Hotels may not be able to provide a normal service; cafes and restaurants may be closed; take-away outlets may be restricted. The deployed team need to anticipate this. They should not rely on normal outlets and a degree of self-help may be required.

### *On site issues*

All investigators are trained and have access to PPE to protect them from accident site hazards including infectious diseases from blood borne pathogens. If standard protocols are followed the likelihood of infection by coronavirus should be low. The coronavirus risk comes from interaction with others on (and off) the accident site where social distancing may not be observed by those not familiar with the risks or who let their guard down when dealing with a traumatic event. By maintaining high levels of hygiene and the correct use of PPE, investigators can be well protected from both coronavirus and the arguably greater risks posed by other blood borne pathogens and material hazards. Teams should consider deploying with additional stocks of PPE and products to sterilise equipment and use disposable items wherever possible.

Accident site scenarios vary widely. Whilst a general aviation accident site in a rural location may pose no abnormal risk during a pandemic, a commercial air transport incident at a major airport may expose the investigation team to a larger number of people. The most challenging scenario is likely to be a major air transport accident site in a populated area, where there may be hundreds of people on the site and limited control over them.

To stay safe the investigation team should follow the normal process of dynamic risk assessment and put in place any necessary mitigations to protect themselves from the virus and other site hazards. Wherever possible ensure that an effective cordon is in place and control access to limit the number of personnel on the site. Have specific areas where personnel can prepare to enter the hazardous area and decontaminate afterwards before meeting others. Personnel should be manually logged onto site in the normal way but contact tracing apps may also be useful to monitor who investigators encounter on and off site.

Support from other agencies may be more limited than normal due to the restrictions and the AIA may be more dependent on their own resources.

### **Alternatives to deploying**

Every deployment should be assessed case-by-case and if the risks are high, consider alternatives to deploying. Increased use can be made of local authorities and trusted agencies to gather and secure the physical evidence for assessment later. Interviews may be conducted remotely via phone or video conference. Increased use can be made of transmitted photos and video, including potentially a live video feed, to enable AIA investigators and advisors to get 'eyes on' the evidence to assess it and direct the action to be taken.

It is not always necessary for AccReps, Advisers and Experts to travel to the State of Occurrence – consider the risks and benefits of them doing so. During a pandemic, consider making maximum use of non-travelling AccReps to supervise investigative work conducted in their locality. Also consider arrangements that would enable manufacturers to support the investigation with less direct supervision than normal but with the AIA maintaining overall control to safeguard the independence of the investigation activity. When travel is limited, there is a greater need than ever for the State leading the investigation to maintain good communications with the other States involved.

## **Subsequent investigation / post field phase**

### *Investigation management and team coordination*

The IiC will need to consider how to create and sustain an effective team when there may be limited face-to-face contact. Activities may need to be coordinated through other means and best use made of collaborative tools. During a pandemic there will inevitably be more friction within the process causing delay. Investigation management may need to be more proactive than normal to keep things moving forward.

### *Follow up interviews*

Interviews may be conducted remotely but any investigator will recognise the limitations of this approach. Some sensitive interviews may just have to be conducted in person. If the interview is conducted face-to-face, the risks can be minimised by using a well-ventilated location, maintaining social distance, using hand sanitiser and wiping down surfaces etc. Some organisations conduct a temperature and/or oxygen saturation check of participants on arrival to provide reassurance to all present that the risk of infection is low.

### *Read out and analysis of flight data*

As ever, it may be necessary to transport damaged or undamaged flight recorders to a suitable laboratory, possibly in a foreign state, to recover and analyse the data. Options to consider include hand-carrying the recorders directly to the laboratory; taking them to an exchange point at the port-of-entry where they can be handed over to a representative from the AIA conducting the readout; or sending them by secure courier.

In the laboratory, participants will wear appropriate PPE and the normal precautions of sterilising equipment and surfaces will apply. It may be necessary to limit the number of people in the room. A wider group of AccReps and observers may be able to participate in the briefing and debriefing of each activity and observe proceedings via a live video link from a separate room.

During a 'lock-down', special arrangements may need to be made to enable crew or advisors to come into the laboratories to listen to the CVR in a controlled environment.

### *Detailed examination of components and systems of interest*

When a detailed examination of components is required, the AIA may need to be creative to work around any travel constraints. Options include: using local resources; shipping components to the best facility for their examination; making best use of Annex 13 protocols to access overseas technical support through AccReps and Advisors; making best use of an OEM's global support network, with reach-back to the Type Certificate Holder with the in-depth product knowledge.

At an OEM or other site, it may not be possible to do multiple activities in a short period of time due to restrictions on movement between teams and different facilities, so the investigation should be flexible and allow additional time.

### *Interaction with operators and other stakeholders*

During an investigation AIA often draw on long established relationships with safety staff at operators, manufacturers and other stakeholders. But during a pandemic, those staff may not be available or even still in place. Greater effort may be required to establish channels of communication with these organisations, and more time may be required to get a response to requests for information due to the extreme disruption caused by the pandemic and its impact on the industry. The hollowing out of some safety teams may mean that company's internal investigations may be slower, less effective or not happen at all.

## **Report preparation and publication**

Report preparation should proceed as normal but additional time may be required if the AIA, or the AccReps and Advisors are subject to lock-down restrictions. The report preparation process is very dependent on good communications and exploitation of collaborative working IT tools.

## **Post investigation activities**

At the conclusion of the investigation, it is possible to carry out some briefings using remote communication tools. However, a face-to-face meeting is always preferable when briefing the bereaved and special arrangements may be required to achieve this during a pandemic.

Judicial processes will continue during a pandemic but may also be subject to constraints and limitations. If called to give evidence by video link, investigators should ensure they do so from a quiet room, free from distractions and with an appropriate backdrop. It is essential to have a stable, dependable IT link. It is sometimes difficult to know who else is on the call and whether it is being recorded. Those giving evidence should be mindful of confidentiality requirements and be careful to protect sensitive material in accordance with the regulations. As ever, investigators must be highly prepared for these demanding events.

## **Sustaining the capability**

A pandemic may be a protracted affair lasting for months or even years. Staff will have a variety of individual concerns and challenges in their domestic situations. Individuals will cope in different ways. A great deal of management attention may be required to sustain the AIA's capability in the longer term.

AIA can provide a lot of practical support and assist staff greatly by making reasonable adjustments to individual working arrangements. Additional effort may be required to maintain good communications both internally and externally with stakeholders, and this is more important than ever. Wellbeing programmes are important, as is access to appropriate professionals to deal with the increased stress that may come about from the situation.

The costs associated with conducting investigations during a pandemic may be abnormal with additional expense in some areas and savings in others. It is important therefore that AIA retain the ability to move resources flexibly between budget lines to maintain overall effectiveness.

AIA need to continue with recruitment and training activities to prevent stagnation or loss of capability. Above all, during a pandemic, good leadership is required to maintain staff morale and engagement in difficult and uncertain times.

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