



**The**

**Safety**

**Wire**

**May 2021**

## **Crew Resource Management**

Is about as broad of a topic as you can find in aviation. There are countless different definitions and approaches to CRM, and classes can take up to a week. Often, the focus of CRM is on exchanging information between people in the most effective and efficient manner possible. That communication is generally assumed to contain information the recipient(s) will want to hear. As we all know, that is not always the case.

One of the most critical components of CRM is ensuring information is received by the recipient and understood as intended by the person sending the message. Ordinarily, there are numerous failure points we must worry about, even when both parties are putting their best effort forward. When the message is something that the recipient does not care to listen to, breaks in the communication chain are almost guaranteed.

These conversations are the most difficult ones we will be faced with in our profession. I have been on both ends of the equation. I've had TFOs tell me I should not fly because I was too sick, tired or stressed about family matters. Other TFOs have had to tell me to pay more attention to flying than doing their job from the other seat. I've had mentors tell me I wasn't yet ready to be signed off for an aircraft, or for a certain type of mission, despite my appraisal of personal awesomeness indicating quite the opposite. There was even the occasion when our mechanic told us we needed to recheck the weather radar before launching on a pursuit call. They were all 100% correct, every single time, and they were true



professionals to speak up. I am embarrassed to say, I was not an ideal CRM practitioner during those conversations, even though the other person was making the right call.

These are the moments where CRM is the most difficult, and the most important. We usually know the other person will not want to hear what we have to say and there is temptation to just face the consequences of inaction instead. Our minds may attempt to downplay the importance of the message in order to justify avoiding the conversation. We may even have the lure, or barrier, of rank that suggests it is not our place to correct someone with more brass on their shoulder than us. These excuses are all paths to disaster.



How can we prepare for such difficult conversations? We need to have an operating framework that not only allows, but demands such conversations are had without fear of reprisal. We need to give our people training on CRM, human factors and modern operational risk management so they can identify dangerous situations and know how to deal with them. Our people need the conversational skills required to carry out tough communication in a constructive manner. We need to set up operational limitations that

prevent us from working when we are too tired, sick or mentally overloaded to be good communicators.

One of the most powerful things we can do to help is by saying, "thank you" to the people who have the guts to tell us what we need to hear, when we need to hear it, even if we do not like the information. Find examples at your operation, share them with the group and give a nod of approval to the person who was professional enough to say what was necessary.

*"Our two greatest problems are gravity and paperwork.  
We can lick gravity, but sometimes the paperwork is overwhelming."*

*~ Dr. Werner von Braun*

## ONLINE MEETINGS

APSA conducts regularly scheduled online meetings for safety officers, maintenance technicians, SAR personnel, UAS operators and natural resource personnel via a conference call you can join using your computer, mobile device or phone. Online meetings are open to any APSA member. Contract maintenance providers to APSA members are welcome to participate in the maintenance meeting as well. If you would like to join, send an email to:

[safety@publicsafetyaviation.org](mailto:safety@publicsafetyaviation.org)

The schedule for upcoming APSA online meetings is as follows.



### **Safety Officers:**

Friday, May 28, 2021  
1:00 PM – 2:00 PM EDT (1700 UTC)

### **Maintenance:**

Wednesday, June 9, 2021  
1:00 PM - 2:00 PM EDT (1700 UTC)

### **Natural Resources:**

Wednesday, June 23, 2021  
1:00 PM – 2:00 PM EDT (1700 UTC)

### **UAS:**

Wednesday, July 7, 2021  
1:00 PM - 2:00 PM EDT (1700 UTC)

### **SAR:**

Wednesday, August 11, 2021  
1:00 PM – 2:00 PM EDT (1700 UTC)

*"Any sufficiently advanced technology is  
indistinguishable from magic."*

*~ Sir Arthur C. Clarke*

## RESOURCES

US Helicopter Safety Team – CRM Recommended Practices:

[https://ushst.org/Rec\\_Prac22A\\_CRM\\_FINAL.pdf](https://ushst.org/Rec_Prac22A_CRM_FINAL.pdf)

FAA OTC Medication Guide:

[https://www.faa.gov/licenses\\_certificates/medical\\_certification/media/OTCMedicationsforPilots.pdf](https://www.faa.gov/licenses_certificates/medical_certification/media/OTCMedicationsforPilots.pdf)

FAA Safety Briefing May/June 2021:

[https://www.faa.gov/news/safety\\_briefing/2021/media/MayJun2021.pdf](https://www.faa.gov/news/safety_briefing/2021/media/MayJun2021.pdf)

NASA Safety Report Newsletter – *What would you have done?*

[https://asrs.arc.nasa.gov/publications/callback/cb\\_494.html](https://asrs.arc.nasa.gov/publications/callback/cb_494.html)

## EMERGENCY PROCEDURE OF THE MONTH

In each monthly emergency situation, discuss what you would do, as a crew, to respond to the following emergency. If the EP does not apply to your specific aircraft, think of something similar.

**Gunfire aimed at aircraft while providing assistance during active shooter**

## REALITY CHECK

**Note:** The following reports are taken directly from the reporting source and edited for length. The grammatical format and writing style of the reporting source has been retained. My comments are added in **red** where appropriate. The goal of publishing these reports is to learn from these tragic events and not to pass judgment on the persons involved.

**Aircraft:**

**BRM Bristell LSA**

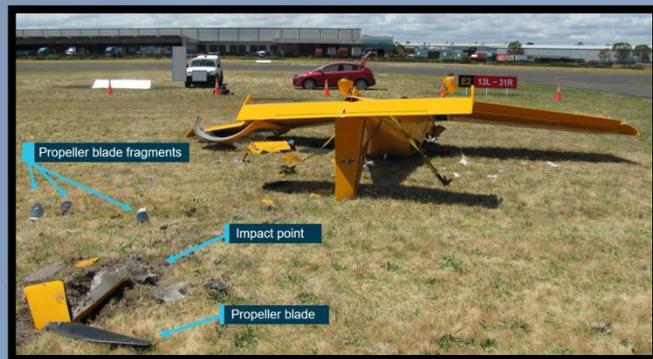
**Injuries:**  
**ATSB#:**

**1 Severe**  
**AO-2019-071**

[https://www.atsb.gov.au/publications/investigation\\_reports/2019/aair/ao-2019-071/](https://www.atsb.gov.au/publications/investigation_reports/2019/aair/ao-2019-071/)

A student pilot took off for a series of solo circuits in a BRM Aero Bristell. Just after crossing the runway threshold for the first touch and go landing, witnesses observed the aircraft about 10 ft above the runway, when it suddenly pitched up to about 40 ft. The left wing dropped, with the bank angle increasing to the point where the aircraft became inverted. The witnesses described what they saw as similar to the aircraft being in the first half rotation of a spin entry. The nose then dropped and the aircraft impacted terrain in a steep inverted attitude. The student pilot was severely injured, and the aircraft was destroyed.

The ATSB found that the pilot commenced a go-around at low level when the aircraft deviated from the runway centreline in crosswind conditions. During the go-around, the aircraft aerodynamically stalled and commenced a spin. It was also identified that the student pilot did not have the necessary qualifications and skills to safely operate the Bristell solo. Finally, the required Soar Aviation solo flight dispatch procedures were not followed. As a result, it was not identified that the student pilot was not authorised for, nor met the required competencies, to conduct the flight.



The student pilot had undertaken only one supervised training flight in the Bristell aircraft, which did not include any go-arounds, crosswind landings or stall training. Therefore, the student pilot's familiarity with the aircraft type was very limited.

**Aircraft:**  
**Injuries:**  
**ATSB#:**

**Cessna 172**  
**3 Minor/Temporary**  
**26747**

[https://www.atsb.gov.au/publications/investigation\\_reports/2020/aair/ao-2020-026/](https://www.atsb.gov.au/publications/investigation_reports/2020/aair/ao-2020-026/)

The aircraft with a crew of three, comprising a pilot, communications officer and observer, had departed Adelaide's Parafield Airport for a second aerial shark patrol at 1.30 pm on 22 December 2019.

While overhead Sellicks Beach, about two hours into the flight, the communications officer and then the pilot became sick. They initially dismissed their symptoms as being

due to turbulence, but the pilot subsequently observed a localized discoloration on the aircraft's disposable carbon monoxide chemical spot detector. The communications officer, in the front right seat, confirmed the discoloration and the crew confirmed they were all feeling light-headed.

The crew immediately opened the aircraft's windows and confirmed the heating was off, however the pilot's condition worsened and they reported losing periods of time, loss of feeling in their legs, chest pains, and a tingling sensation in their hands. With support from air traffic control, the pilot was able to return the aircraft to, and land safely at Parafield Airport, despite experiencing increased light-headedness and ongoing confusion.

On landing, the crew were then taken to hospital for medical examinations. Blood test confirmed they had mildly elevated carboxyhaemoglobin levels.

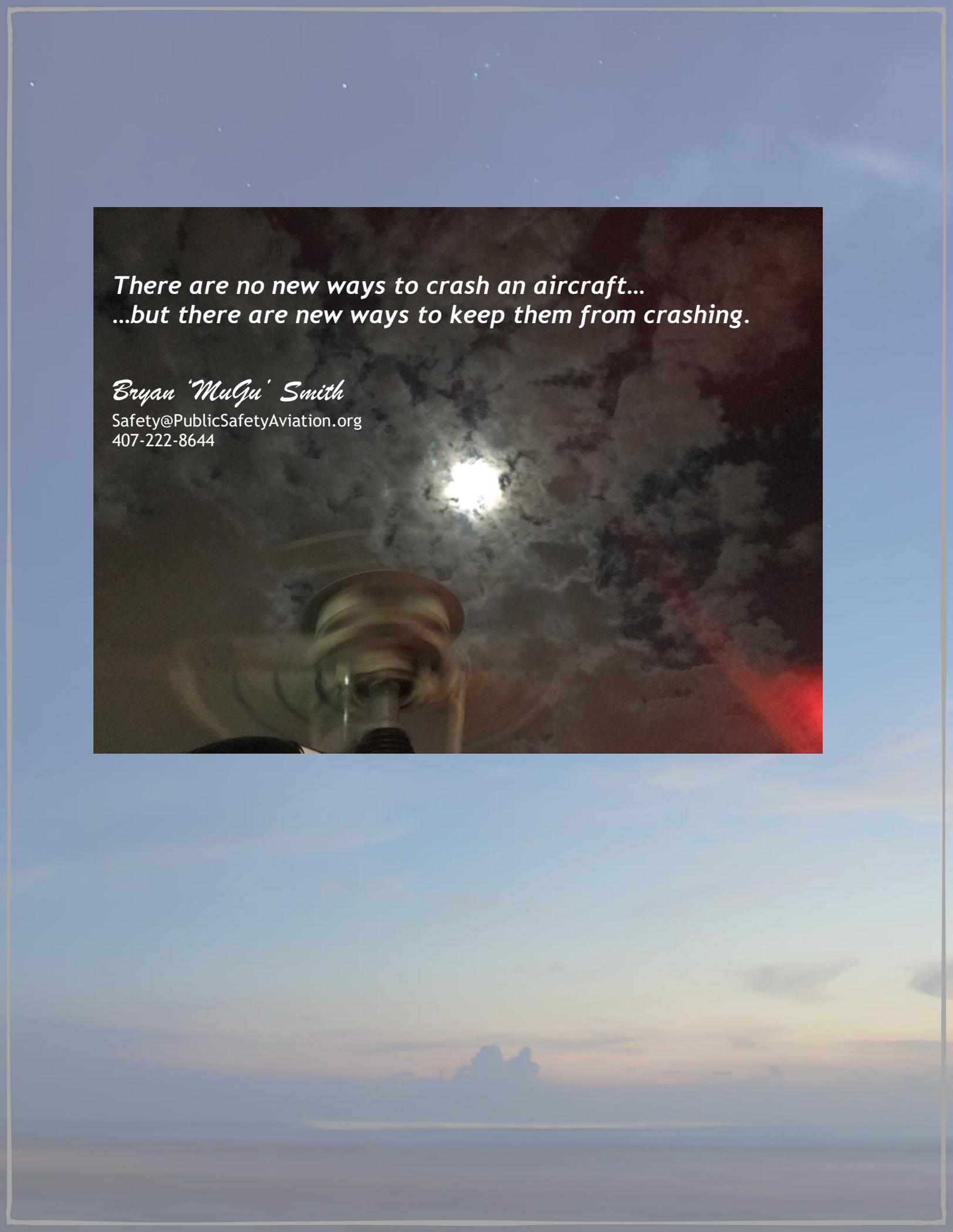
"Despite having only mildly elevated carboxyhaemoglobin levels, the crew's physical symptoms and cognitive effects likely resulted from exposure to elevated CO levels in the aircraft cabin," said ATSB acting Director Transport Safety Kerri Hughes.

<b>Aircraft:</b>	<b>Bell 412EP</b>
<b>Injuries:</b>	<b>1 Fatal</b>
<b>ATSB#:</b>	<b>AO-2013-136</b>

[https://www.atsb.gov.au/media/5542550/ao2013136\\_final.pdf](https://www.atsb.gov.au/media/5542550/ao2013136_final.pdf)

At about 1050 Eastern Standard Time, the crew of a Bell Helicopter Co. 412EP helicopter, were tasked to pick up a patient who was reported to have sustained injuries during a fall in the hills around Macs Cove, near Mansfield, Victoria. Due to the confined winch area and the possible fouling hazard associated with nearby trees, the crew elected to conduct a double-lift extraction with the patient in a rescue strop, accompanied by a paramedic. As the paramedic and patient reached the helicopter's skid-landing gear, the patient became increasingly unresponsive and began slipping from the rescue strop. The paramedic and winch operator attempted to restrain the patient however, despite their efforts, the patient slipped out of the rescue strop and fell to the ground, sustaining fatal injuries.

The ATSB found that, due to the compressive nature of the rescue strop around the patient's chest, combined with the patient's weight and pre-existing medical conditions, the patient probably lost consciousness during the winch operation. While the rescue strop was serviceable at the time, it was not suitable for the patient and contributed to them falling from the strop following their loss of consciousness. The ATSB also identified that the operator and Air Ambulance Victoria had limited documented guidance to assist rescue personnel select the most appropriate winching rescue equipment.



*There are no new ways to crash an aircraft...  
...but there are new ways to keep them from crashing.*

*Bryan 'Mugy' Smith*

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