OUR VISION: A Civil Helicopter Community with Zero Fatal Accidents

HELICOPTER FACTS

May 2020

Using Crew Resource Management on All Helicopter Flights
(For Helicopter Air Ambulance and Other Civil Crewmember Operations)

The USHST has developed an initiative specifically because the practice of Crew Resource Management (CRM) has not been formally adopted throughout the helicopter industry.

There are many reasons for this. For example, many helicopter operations include an interdisciplinary crew of one pilot and one or several specialists with other functions that are not aviation related (e.g. nurses on air ambulance or observers gathering data). These non-flying crewmembers may be hesitant to speak up about a safety issue because they have not received formal CRM training or because they are not pilots so believe they do not have useful observations to share. Likewise, many helicopter pilots may not have received CRM training and may not be used to or comfortable with considering the input of a non-pilot crewmember.

The document developed by USHST (www.USHST.org), a Recommended Practice report, especially targets the industry sectors of air ambulance, aerial observation, firefighting, utilities, law enforcement and news gathering.

The report, entitled ***Detection and Management of Risk Level Changes During Flight by Pilots and Non Flying Crew***, can be found at http://ihsf.aero/index.php/recommended-practices/ along with a sample briefing card for helicopter crew members.

Our goal is to reduce accidents by developing and disseminating the general concepts of CRM, modified for interdisciplinary crews that helicopter operators can adopt, develop, and teach to their personnel.

Essentially, every person on the helicopter is a vital member of the crew, and EVERY crewmember is a resource to ensure the safety of the flight.

Responsibilities

PILOT	CREW MEMBER OR PASSENGER
FLIGHT VETO AUTHORITY: Yes	FLIGHT VETO AUTHORITY: Yes
AIRCRAFT CONTROL: **Primary**	AIRCRAFT CONTROL: in an Emergency
HAZARD IDENTIFICATION: **Primary**	HAZARD IDENTIFICATION: **Primary**
SITUATION COMMUNICATIONS: **Primary**	SITUATION COMMUNICATIONS: **Primary**
DATA COLLECTION: None	DATA COLLECTION: Secondary

Recommended Practices

1. Helicopter operators should provide recurring formal classroom training for their interdisciplinary crews in crew resource management. This training should be provided to interdisciplinary crews as a unit, rather than separating the training by discipline (pilot, flight nurse, etc.). This furthers the concept of "training the way we work" while in the helicopter. At a minimum, training should include concepts of crew resource management, decision frameworks, communication tools, personality types, and cultural influences, and should be incorporated into the operator's Safety Management System.

2. Helicopter operators should develop and provide recurrent scenario-based training for interdisciplinary flight crews. Ideally, this would be conducted in a flight training device that allows the entire crew to be located at their normal stations, while realistic weather and aircraft issues can be simulated. Scenarios should be built around common problems that arise during the operator's flights. This could be added to existing simulator-based Line Oriented Flight Training.

3. During low workload in-flight periods, pilots and crewmembers should create and discuss scenarios that help solidify roles, responsibilities and specific actions that crewmembers should take. These real-time in-flight scenarios are extremely valuable since they encourage participation by all crewmembers in a realistic setting, and hone naturalistic decision-making skills.

4. Helicopter operators should develop a document, customized to their mission types, that explains the CRM roles that each person plays onboard the aircraft. Each person, thereby formally acknowledging his or her understanding of his or her CRM roles, should sign this document.

5. Helicopter operators should develop briefing cards, customized to their mission types, which remind each person the CRM roles everyone plays, hazards that are common for the mission type, and specific communication protocols. These briefing cards should be kept on the aircraft, and each member of the crew should also carry a copy. The pre-flight briefing should include all elements listed on the card.

In-flight Communications Tools

General training on communication encourages crewmembers to be accurate, bold and concise – the ABCs of communication. Crews can also be taught to use Bishop's 5-step model in communicating when the need for action is not immediate:

1. Get the attention of the person: Hey Captain Ted!
2. State your concern: I'm concerned about this thunderstorm!
3. Describe the problem as you see it: If we stay on this heading, we might be struck by lightning.
4. Suggest a solution: Let's change headings to stay further away.
5. Achieve buy-in: Does that sound reasonable to you?

Perhaps less used outside the military and firefighting, but potentially very useful for helicopter crews, is the use of key phrases or "break-through" tools with instantly-recognizable and previously agreed-upon actions to be taken immediately and without question, especially under time constraints or if the communication has not been effective. Some refer to this as the "This is stupid!" technique. For example:

- Knock it off: Cease the operation and return to base
- Red flag: Cease the operation, climb to a safe airspeed and altitude and discuss the issue prior to continuing
- This is stupid: Let's reconsider what we're doing before we proceed

A Final Word:

"Creating a team of experts requires open channels of communication – making it psychologically safe for the most junior staffer to approach the captain about an important safety issue. Because it isn't about who's right, but what is right." - Sully