2022 CREW RESOURCE MANAGEMENT Ground School

To Honor American Military Aviation Through Flight, Exhibition and Remembrance

Please *silence/vibrate* cell phones

Welcome to our CRM Ground School. Today we will be looking at CRM, what it means and how it applies to operating our aircraft. Although we all kind of know what CRM is, we often thin   k of it as merely a factor in aircraft accidents. That is true, CRM is highlighted in every accident autopsy for both the good and not so good outcomes (think of United flight 232, Air France 447) . But CRM isn't something that only applies when there is a non-normal problem, it is actually about the way each of us manage our responsibilities as pilots and crew members - on every flight. Call it pilot style or technique, but it's really CRM. And while we are discussing its applicability in our cockpits, its elements are found in every human relationship and interaction. Having said that, can you think of an interaction with another individual that went well? Can you also recall an encounter with a difficult person? Putting those experiences to the test in an airplane will challenge whether a crew will be able to remain effective and safe.

VIDEOS
- Guess the name of the First Officer
- History of CRM

Since the mid-70's there has been a lot of progress in understanding the dynamics of flight crews. Studies have been and continue to be done about what factors combine to create an effective cockpit or flight operation. In the early days of aviation, Captains, much like the boat captains in the sailing age, were given full authority and were not to be challenged. Unfortunately, not all captains are perfect and many aircraft accidents have been the result of a captain's misjudgment. Particularly frustrating is the fact that many accidents might have been avoided had the captain simply asked for or paid attention to information held or offered by others. CRM is is nothing more than an attempt to optimize the effectiveness of flight crews.

HISTORY OF CRM

CLICK ON IMAGE FOR VIDEO
Self Explanatory

RHYMES WITH "KILL"

CLICK ON IMAGE FOR VIDEO

In this Pan Am video, the Captain overloads his FO with requests, questions and directions. Understanding the capability of others and modifying procedures to meet their abilities is a key element of the film.

How could the CA have helped the FO?

How could the FO have helped himself?

EVERY FLIGHT IS A COMPRISED OF:

- People
- Equipment
- Information
- Environment
- Reality Check

People: Crew members, ground personnel, passengers, training, experience, abilities, personality, mood, health, pressures, rest, egos.

Equipment: Plane, condition, suitability, functionality (what's not working correctly?), rationalizing a problem away, overtasking.

Information: Weather, mechanical condition, passenger, time, expense.

Environment: Operational pressure, other's expectations, personal expectations, weather, remaining daylight, time, egos.

Reality Check: How do all the problems and advantages combine?

My brother once thought adding syrup to pancake batter would save a step. Order and sequence is important.

CRM

- How Information is shared, received and turned into _Action_
- Involves Self Awareness
- Situational Awareness
- Communication
- Individual and Group Attitudes
- Goes beyond just reacting to exigent needs

SELF AWARNESS is knowing what you can safely manage/perform and your own bias/predisposition. Perhaps it also includes appreciating the capability and limits of the aircraft you're flying. Communication is only effective when others are willing to listen. When flying single pilot, it means an honest appraisal of the flight and a willingness to make adjustments.

CREW PERFORMANCE IS ENHANCED WHEN OTHER CREW MEMBERS KNOW WHAT TO EXPECT

- Brief all crewmembers on the planned operation
- The PIC is responsible for setting the tone and overall flight management
- Review who's performing the flying, monitoring and other crew duties
- Threats, Concerns, <u>Offsets</u>
- Passenger Care/Briefing
- Emergency Procedures
  - -Aborts
  - -Non-Normals in Flight
  - -Evacuation
- SOPs
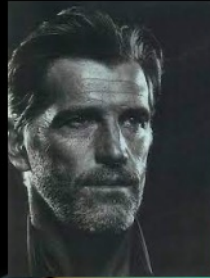
SO, WHAT'S THE PLAN?

Its difficult to spot errors when crew members are inconsistent and unpredictable. Technique is the manner in which a procedure is performed. It is not a substitute for the procedure. Brief what you fly and fly what you brief. You, other crew members and even passengers might be able to spot an error quickly when you do. Flying single pilot, it's important that procedures are faithfully executed; deviations, errors and mechanical problems can be more quickly recognized. Set a tone for others and yourself to fly correctly. Crew members need to read each other and offer information in the most effective manner (know your audience).

- We've been losing oil for the last 10 minutes.
- I noticed that the oil temp is quite a bit higher than it was 20 minutes ago.
- If this keeps up, I'm afraid the engine is going to fail.
- I think we should land and have it looked at.
- What do you think?

Crew Composition – How many and how well they work together.

Crew Competency - Proficiency and ability.

SOPs – Is there a desire and willingness to do things correctly?

Encouraging Input – All crew members contribute to the tenor of the flight. The captain has the largest influence and sets the example. He must listen to the concerns of others.

Performance Monitoring – It's an active task. Be responsible for each other. Speak up when necessary.

Error Recognition – Is enhanced when expectations are established.

Feedback - Offer it ask for it welcome it.

Managing Information – Download. Get assistance. Use the autopilot or FO. Task saturation limits the amount of information anyone can reasonably handle.

Consensus – Double check yourself and consider what ideas others nay offer. As a crew member, speak up when concerned.

Willingness to Modify a Plan – Always. Conditions constantly change. Plan A may turn into Plan B, C or D.

Making the decision to ACT – Making a decision to act for good reasons usually works out well.

Important information is often overridden by needs and desires. Ex: "I have a meeting tomorrow and I really need to get back to home base." Pilots flying 80 year old airplanes should continually entertain the possibility that their flight could go agley. In the charter world, every pilot flying a quick out and back trip packs a suitcase with one or two days worth of clothes. They do that because they know that things break. Negative factors accrue and impact objectivity.

PROBLEMS IDENTIFYING PROBLEMS

- Ambiguous Information
- Non-Standard Procedures
- Distractions
- Complacency
- Denial
- Tunnel Vision

Ambiguous Information prevents identification of problems.
Same for non-standard procedures. Without establishing expectations, problems don't look like problems.
Distractions can prevent crew members from recognizing larger problems.
Complacency comes in two forms: Indifference and Dismissiveness.
Denial is a combination of disbelief, incredulity and fear.
Tunnel vision occurs when a mind under stress can no longer process additional information or input.

There are two types of problems: 1) Time Critical and 2) Not Time Critical. The type of problem you experience will dictate how many resources you will be able to access. When communicating, be clear and specific about the problem you're experiencing and the assistance you require.

ATC and the CAF are also resources.

USAF TRAINING FILM MAC 249
HTTPS://WWW.YOUTUBE.COM/WATCH?V=XJOESIRNJU0

CLICK ON IMAGE FOR VIDEO

This is what good CRM looks like.

THE END

You may now turn your phones and vibrators ON!