



The Safety Beacon is for informational purposes. Unit safety officers are encouraged to use the articles in the Beacon as topics for their monthly safety briefings and discussions. Members may also go to LMS, read the current Beacon, and take a quiz to receive credit for monthly safety education.

December 2017

**Happy
Holidays!**



What's In the Beacon?

Hopefully this month's Beacon will bring some helpful and thought provoking ideas for your safety and risk management programs in CAP, as well as your personal practice of risk management. Enjoy your holidays! Here's what's inside the Beacon:

- "Report all mishaps!" Let's review the guidance on what needs to be reported in SIRS.
- The "5 M's" ... A new guide to help you look for all the contributing factors when you're doing a mishap review.
- A Commander's "Risk Management Style." Let's take a look at the emphasis the Air Force puts on risk management in leadership.
- How's Your CRM? Do you adhere to the "Sterile Cockpit" rule?
- A couple short topics to help with your risk management.
- A summary of some recently closed mishaps with a focus on what we can learn from *each* of them, and from *all* of them.

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“What Am I Supposed to Report?!”

I Need Your Help!

George Vogt, CAP/SE

As I go about writing new guidance to take the place of CAPR 62-1 and CAPR 62-2, one of the things I want to focus on is making the guidance very clear for all the members who have to understand it and implement it. Admittedly, there are a few things in the existing regulations that leave us scratching our heads, and one of the prime goals of my ground-up rewrite is to get rid of those “head-scratchers.” I NEED YOUR HELP!

Let’s take a look at some thoughts on what we need to report when it comes to Aircraft mishaps, Vehicle mishaps, and Bodily Injury mishaps. I am looking for YOUR FEEDBACK on whether you think this guidance is clear, or if you have any questions, or if you have any suggestions. Here we go.

What does the regulation say we have to report? CAPR 62-2 says it is “extremely important to report all mishaps” but there isn’t a lot of guidance, or specifics, or examples after that.

What is a “Mishap?” If we’re asking you to report “all mishaps” then a good place to start is the definition of “mishap” in 62-2. Except, it is not a very good definition. It talks about “operational occurrences” that cause damage or injury, or have the potential to cause injury. But what if we just find damage ... don’t we need to look into it to find out what the “occurrence” was that caused it? The word “operational” (which isn’t defined anywhere) is also a bit of a red herring. Let’s just say a mishap is an occurrence that caused or has the potential to cause damage or injury. Finding damage is evidence that there was an “occurrence” so we need to report it. Is that a fair start?

AIRCRAFT: First of all, if you notice any damage of any kind on an aircraft, it needs to be reported. One of the purposes of mishap reporting and review is to identify the factors that led up to the damage, in hopes of reducing damage, so all damage needs to be reported. That reinforces the need for a very thorough pre-flight AND a thorough post-flight so YOU can be sure the airplane was undamaged when you locked it, chocked it, and walked away.



What about “mechanicals?” When do we consider a mechanical failure, or a “maintenance issue,” a mishap? For example, if we go out to our airplane, and find a dead battery, or a light that doesn’t work, or an oil leak, I don’t consider that a mishap ... that is a common maintenance issue and should be handled through your routine maintenance processes. But what if a tire goes flat as you are taxiing onto the runway? What if you lose electrical power while in flight? What if your engine starts running rough on final approach. Those are all “occurrences” which have the potential to cause damage and they need to be written up. Remember, it is not your responsibility to figure out “what probably caused it” or what went wrong. That is for the mishap review officer, and I’m sure every pilot will agree ... if there is something we can do to prevent things from breaking in flight we need to do it, and the first step is to look into what caused that failure or malfunction.

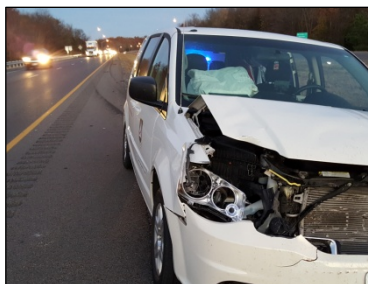
I was chatting about this with one wing commander recently; I like talking to her and hearing her thoughts. The guidance she is working with is to file a mishap for mechanical problems if they occur “while moving.” In other words, once they’ve started up, and have taxied or taken off for their mission, and something happens that alters or aborts that sortie, it is a “mishap” (remember the “potential”) and

they write it up as a mishap. **What do YOU think of that?** Is that clear guidance on when you should or shouldn't file a mishap report for a mechanical problem? Do you have any other ideas?

Keep in mind that 15% of all general aviation accidents in 2014 were caused by mechanical failures or errors in aircraft maintenance. THAT is why we report them. Read more about it on page 3 of the [October '17 Beacon](#).

VEHICLES: Knowing when to report vehicle mishaps is a bit easier. The same rules we talk about for airplanes in the paragraphs above, can probably apply to vehicles also.

If you show up at your vehicle and the horn doesn't work, or a light is burned out, those are simple maintenance problems and can be handled through your normal vehicle maintenance channels. If you show up and find some unreported damage while you're doing your vehicle inspection? THAT needs to be reported as a mishap. Obviously there was some occurrence that caused damage to the vehicle, and the mishap reviewer can look into what might have caused it.



If anything mechanical goes wrong, or something on the vehicle breaks, or a tire goes flat while you are driving, it needs to be reported as a mishap. If your vehicle hits something, or is hit by something, you need to report it as a mishap. Remember, it isn't the driver's job to determine what caused it. Just put it into SIRS with as many facts as you know, and the review officer will look into all the factors and circumstances.

Any more questions or things that need to be clearer for vehicle mishap reporting?

BODILY INJURIES: For airplanes and vehicles, we said that all damage needs to be reported as a mishap. The equivalent guidance for our members is that all injuries need to be reported. Again, it is not up to you to determine what caused it; the review officer or an interview with the injured person can help you figure out the factors that might have led up to it.

One of our primary aims in reporting injuries is to determine if there are any areas where our planning or our risk management might have broken down, and all of that can be done later (see the article about the "5M's" in this Beacon).

There are always questions about whether or not to report illnesses, or aches and pains, especially when they occur at encampments or strenuous cadet activities. Some of those might be very normal, but many are symptoms of heat stress, fatigue, over-use injuries, or other issues that might have been caused by the activity or the overall plan. When in doubt, it is best to report it and then use a review process to determine what might have led to the symptom in question. REMEMBER, it is never enough to just report a symptom or an injury ... we need to do some level of review to determine what might have caused it. For more info, check out the article on page 9 of the [July '17 Beacon](#).



REMEMBER: I NEED YOUR HELP!! Whether you're a safety officer, a leader of cadets, a pilot, a squadron commander, or any other member active in your squadron, I WANT TO HEAR FROM YOU. Is this a good start at clear guidance on what needs to be reported in SIRS? Does this bring up any unanswered questions? Do you have any suggestions? Let me know at:

safety@capnhq.gov

The “5 M’s”

A “cheat sheet” for mishap reviews

George Vogt, CAP/SE

For all of you out there who are appointed as a review officer for a mishap, and find yourself wondering what it is you’re supposed to look at, I assure you that help is on the way!

Coming with the new safety regulation will be some more specific guidelines on who reviews mishaps and what those mishap reviews should look at. We’ll follow that with instructional material on how to actually do a review and how to write a mishap review report ... there really isn’t much guidance on that right now. The final vision will be for SIRS to guide you through that process in an automated format. But for now, here’s a glimpse into the future...

“5 M’s.” It is easy to look at the mishap itself, and what might have happened right before it, but how do we know what to look for when we are considering all the factors and processes and circumstances and policies that might have influenced the mishap? The “5 M’s” will be used to guide the reviewer through that process. The “M’s” stand for **Member, Medium, Machine, Mission, and Management**. Let’s take a look at how these “M’s” can lead you through the review process:

Member: Take a look at all the information about the person themselves. A few examples:

- Was the member trained for the mission or activity?
- Were they physically able to perform the task?
- Were there human factors like fatigue, dehydration, or illness that might have been a factor?

Medium: This refers to the environment at the time of the mishap and what effect it might have.

- What was the weather and what effect did that have on the mishap? Heat? Cold? Rain?
- How about the terrain? Was the “playing surface” appropriate for the activity?
- What was the lighting? Was it noisy? Distractions? Anything else about the “conditions?”

Machine: This looks at the airplane, the vehicle, and ALL the equipment that might have been used.

- Was the equipment well-suited to the task or mission?
- Was the equipment well-maintained? Well designed? What “broke” and why?

Mission: This refers to how the actual mission or activity was planned and executed.

- Was the activity well-planned?
- Was a Risk Assessment accomplished before the activity and were risk controls actively used?
- What happened during the activity, and what decisions were made?
- Was the mission or activity too complex for the members involved?
- What was the chain of events that led to the mishap; what went wrong?

Management: This refers to the organizational factors that influence our activities and missions.

- What do the regulations and written guidance say about the activity?
 - Are they clear? Easy to understand? Were they followed?
- Is there any other informal guidance or local standards or “the way we’ve always done it?”
- Who was in charge? Was there adequate supervision?
- Did the plan define everyone’s role, and did everyone perform that role?

What next? Hopefully, by using the “5 M” approach, you were able to take a close look at all the things that might have played a role in the mishap. But what do you do with that information?

In most cases, you ask the question, “why?”

For example, you might look at the “Member” and see that the member wasn’t trained to drive that kind of vehicle. If the training is a risk control meant to prevent this type of mishap, then asking “why” can help you find out where things went wrong. “Why” did the member feel the need to drive the vehicle if they weren’t trained? “Why” weren’t they trained?

Another common example can be seen when we look at “Management.” No risk assessment done before the activity? “Why?” No clear guidance on the right way to do this task? “Why?” Did this cadet activity lack the proper supervision? “Why?”

You get the idea. Don’t be satisfied that you found “the cause.” Take the time to find out what allowed that “cause” (there may be several) to happen, and then you can figure out what changes can be made to control the risk(s) that you’ve identified.

NFWOD? A term you will be hearing more of is “Non-Factor Worthy of Discussion” (NFWOD). As you look through all the factors that influenced the mishap, you might find other issues that are worth looking into. They might not have anything to do with the actual mishap, but they are “worthy of discussion.” You might find some outdated guidance. You might witness an inconsistency in the way members are interpreting a certain regulation. You might even find a stairway railing that needs to be replaced. Those might not have influenced this mishap, but they are worth noting and letting the appropriate leadership know what you found so it can be addressed/fixed/improved.

LET’S PRACTICE!

Using the “5 M’s” is something all safety officers and commanders should be comfortable with. It would be a great topic for a monthly safety meeting discussion!

1) Pick a mishap that happened in your squadron, or one that you heard about in the wing or read about in the Beacon.

2) If you want to make it more interesting, add a few more details and a few more “factors” that your members can help uncover.

3) Begin the discussion. Lead the members through the “5 M’s” so they get used to looking at all the things that can lead to a mishap. Prompt them to ask questions like “why” and “how can we fix that?”

4) Do it for real! If you have an actual mishap in your unit, get the people involved to help you through the process. This will work great if you get a team of cadets on the job! Learning all the things that can lead to a mishap will help grow your appreciation of how mishaps may be prevented!

IN THE NEXT BEACON: How can we use the “5 M’s” in our planning and risk assessments?

Let me know what you think: safety@capnhq.gov

A Commander's "Risk Management Style" An Air Force Perspective

George Vogt, CAP/SE
My Opinion

Throughout my long career in the Air Force, I saw cases where commanders were relieved of command for various reasons. Appropriately, the reason for the removal isn't always publicized. It might be something the commander did that everyone would recognize as "wrong." In a lot of cases, the senior commander who had to make the decision might have felt that the commander in question was making a series of poor decisions, or not really following the senior commander's vision or intent for the unit.

In those cases, we would hear the phrase that the senior commander had "lost confidence in his/her leadership." Nothing more really needed to be said.

I recently read an article about the Commander of a well-known Air Force squadron who was removed from Command. In this case the announcement was a bit different. The senior Commander had a loss of confidence in his "leadership and risk management style." The announcement went on to say the Commander's leadership approach "was leading to increased risk."

This is the first time that I have seen "risk management" as a reason for an Air Force Commander being relieved of command. While unfortunate, it shows the Air Force's strong top-down commitment to Risk Management, and it shows that the Air Force expects that same commitment from all of its leaders.

Do we all have that same level of commitment to risk management in all we do?

Crew Resource Management (CRM)

George Vogt, CAP/SE

When you are the Pilot in Command, do you conduct a CRM briefing with your fellow crewmembers before you fly? Do you specifically talk about the requirement for a "sterile cockpit" during critical phases of flight such as taxiing, takeoff, climb, descent, landing, and operation in high-density areas?

That briefing is required by the new [CAPR 70-1, Civil Air Patrol Flight Management](#). Check out paragraph 9.9.1.

This is part of what I personally hope will be an increased emphasis on the need for a more formalized CRM program in CAP. Prior to every flight, and prior to every critical phase of flight, there should be a quick briefing on what is expected of each person on board the aircraft.

I would love to hear some of your techniques for CRM. Have you set standards for yourself? Your unit? Share them, and be part of our improvement.

Your thoughts? safety@capnhq.gov

Safety Shorts

George Vogt, CAP/SE

“Do an ORM?” ... that’s not a thing!

As we go forward and work to standardize our approach to risk management, it will be important that we get on the same page about some of the language we use. It will help us understand more about how risk management works, and it will help everyone understand what is expected in our day to day risk management.

Recently I’ve heard people ask things like, “do we have to do an ORM?” Others will make a comment like “he didn’t do an ORM before the activity.”

First, let’s look at the term ORM, short for Operational Risk Management. The Air Force has stopped using the term, because they recognize that Risk Management is a process that needs to be practiced in everything they do, not just operations. In the months to come we will follow their lead, and do away with most references to “ORM” and replace it with “RM” (the only exception will be the pre-flight ORM process outlined in CAPR 70-1).

Second, “an ORM” is not a thing. When people talk about “doing an ORM” they are usually referring to a “Hazard Analysis” and a “Risk Assessment.” That’s the process of studying the plan and identifying all the hazards, figuring out what the risks are, and then coming up with risk controls that will be incorporated into the plan. Keep in mind that the Risk Management process continues throughout the activity, and the activity plan should designate who is responsible for the on-going review of hazards and risk controls as the activity takes place.

So, if someone asks you if you did “an ORM” you can let them know that you are following the risk management process and “an ORM” is not a thing.

How is Your “Fainting Prevention Plan?”

We’ve talked a lot about fainting. It’s not an uncommon occurrence among our cadets. I thought I’d put a lot of the past information in one spot to help out.

I’ve written two articles about things that can help reduce the fainting occurrences. Following some fainting mishaps, I have seen a couple Region Commanders assign these articles as mandatory reading for the commanders and cadet leaders. Here they are:

- *“Can we prevent all cases of fainting? ...”* [May 2016 Beacon](#)
- *“He fainted!” “So did she!”* [July 2017 Beacon](#)

The biggest advice I have is for the Deputy Commanders for cadets to get with the senior ranking cadets in each unit and come up with their own plan to prevent fainting episodes. Some plans I have seen include Cadet-run recalls the night before a PT session or other big event to remind everyone to eat well and hydrate. Assign each cadet a wingman and the duo can work together on their hydration and nutrition. Have healthy snacks and water available at the beginning of every meeting or activity and specifically ask the cadets about what they’ve had to eat and drink that day.

If we do this, we aren’t just working on the “fainting problem.” We are teaching our cadets about risk management, team work, developing programs, and caring for one another.

Please let me know what your squadron does!

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Mishap Closeouts

George Vogt, CAP/SE

This month we'll look at a cross-section of various mishaps. To be honest, many of them will sound familiar to you. Many mishaps have similar circumstances, and similar scenarios, but each one is different and each one provides different clues. The focus this month will be on what we can learn from each one of these, and what "trends" we can see from all of them.

First, let's look at the word "trend." Too often when people think of mishap trends they think of the type of injury or the final cause of the mishap. For example, let's say our squadron sees a "trend" of sprained ankles in our squadron PT. A trend like that tells us nothing more than we need to take the time to find out what caused the sprained ankles. If we don't know what is causing the sprained ankles, we have no hope of reducing their frequency. A lot of old-school safety officers will say the common cause of the sprained ankles is "slips, trips, and falls" as if that is as far as the mishap review needs to go. However, a good safety officer, who understands risk management, will go another step to find out what caused the slip/trip/fall. They dig in and find the circumstances of each one. Then they look to see if there is something they can do about the circumstances or factors that contributed to each one. THAT is where we start to make progress in safety. Perhaps something will stand out that is similar about the sprained ankles ... perhaps most of the injuries occurred on one particular sports field. NOW we have isolated something that we can address in our quest to reduce injuries.

The role of the commander and safety officer? Every squadron commander and every safety officer should be aware of, and track, the circumstances surrounding each and every mishap in their unit, and use that information to determine how they can improve their processes and procedures to reduce the hazards and risks they discover through the mishap review process. That is risk management.

With that in mind, let's take a look at some of those mishaps.

Bodily Injuries:

The first mishap is a cadet fainting episode. They are relatively common, and we will never prevent all of them, but we need to look at our overall efforts to reduce them. In this case, a prospective cadet fainted while standing in formation. After the fainting episode, it was determined that the cadet hadn't eaten all day. We don't know if there were any other circumstances that might have contributed to this episode, since the squadron didn't put any more information in the mishap report. I know this may sound a bit harsh, but that tells me they just didn't care about what made the *prospective* cadet faint.

This squadron may have had some good processes for making sure their own cadets pre-hydrate and eat well on the days before meetings. They might regularly brief their cadets on the importance of hydration and nutrition and the cadets might even have a recall the night before meetings to remind each other. So what went wrong in this case? They don't have anything to help the *prospective* cadet, and perhaps that is the cadet that needs the most help. So how can we use that information to improve

our program? Assign a wingman. Make sure the wingman asks the prospective cadet if they've eaten and drank enough water that day. Have healthy snacks available before every meeting. Prospective cadets may not be used to standing for long periods so the wingman can take them aside to rest and teach them the right way to stand at attention. THAT is how you look at all the things that led up to a mishap, and look for ways we can improve.

Get a good picture. This bodily injury mishap involved a senior member who was helping take some pictures during a squadron promotion ceremony. Many of us can put ourselves in that situation; we're moving around table and chairs, trying to get the perfect shot, while not getting in anyone's way when Oops. Over we go. In this case the member tripped over an extension cord while backing up. They were between the tables where no one normally walked, so nobody thought the cords would be a problem. In this case, we have to look to our own personal approach to risk management ... are we making a conscious effort to look at the hazards and risks we face? You've heard me talk about it before. If this member had asked the questions, "what can go wrong, and what am I doing to prevent it" then this wouldn't have occurred. If he just told himself that his mission was to take a good picture "without getting hurt" then he would have been aware of the hazards. While a lot of risk management is a team effort and a group process, each of us must adopt a "personal culture" of good risk management.

Set-up for the meeting! Occasionally, our injuries don't occur during the event itself, but when we are setting up or putting away the equipment we are using for the event. Some of these injuries come from things as ordinary as tables and chairs. In one case, the cadets all joined in to set up chairs as quickly as they could for their unit meeting. While unfolding one of the metal chairs, it sprung closed, pinching the cadet's hand, resulting in bruising and painful swelling. In another case, cadets were taking down folding tables and, you guessed it, the table legs closed on the cadet's hand.

Neither of the furniture moving endeavors including a safety briefing. What? We have to do a safety briefing for *everything*? Don't think of it as a requirement ... think of it as something you want to do so you can work as a team and get the chore done quickly, all working for the same goal, without anyone getting hurt. It doesn't take long ... gather everyone together, make sure everyone understands the goal, talk about the hazards (like bumping into each other, or dropping chairs, or chairs folding on your hands) and then get started. Here's an example of how a very quick briefing like that might look ... [Quick Briefing Guide](#).

Aircraft Mishaps:

Let's look at one aircraft mishap this month. This one was relatively minor, but gives us a few things to think about. Like the mishaps above, we'll look at some of the things that contributed to the mishap, and I'm sure all of us will say, "I can see how that could happen." The key is coming up with some processes we can use to keep it from happening. On this occasion we learned a lot because the pilot was very honest and very forthcoming about his decisions, realizing that he is helping all of us learn from the situation ... we owe him a big thank you.

The pilot was flying an orientation sortie with an excited cadet. They were getting ready to land and the traffic pattern was busy with several aircraft. The cadet was not feeling well and had already used one airsickness bag and was preparing another. Coming down final, the pilot realized he was a little fast and would land a little longer than intended. He admitted feeling a bit stressed because of the uncomfortable cadet, and the busy pattern, so he decided to land rather than going around. There was also construction at the airfield, and he wanted to turn off at the next taxiway so he didn't have to turn



Left Tire

around on the runway and back taxi. So he put on the brakes a little too aggressively and got into a bit of a skid. As you can see, both tires were flat-spotted, but didn't lose air.

Like I said, we can see how all those stressors and decisions can lead up to a situation like this, but there are things every pilot can remember...

1) Cadets and new pilots will get sick. Strive to make them comfortable, but it is a fact of life and about all you can do to "mitigate the risk" is to have several airsick bags ready and already open so there is no delay when they are needed.

2) If you need to go around, go around. Other aircraft in the pattern, or nauseated cadets, should not influence that safety decision.

3) If you can't safely slow down in time to make the taxiway, and you need to pass it by a little and back-taxi, then do that. YOU are flying YOUR airplane until it is locked and chocked at the end of the day.



Right Tire

Vehicle mishaps:

Failure to use Risk Management. There are some vehicle mishaps that just can't be prevented. There will be cases of someone texting, and running into the back of your van. A deer will jump out in front of your car when you least expect it. That's why we have seatbelts, and airbags, and other safety equipment. There is risk involved when we operate a motor vehicle and we can't eliminate all of it.

I think the CAP vehicle mishaps that bother me the most are the ones that could easily be prevented if we simply used a bit of risk management. Very simply, "what can go wrong and what am I doing to prevent it?"

Here's a common one ... the member "inadvertently turned too early" and hit a yellow post in a parking lot. Another one involved a driver who stopped in an automatic gate to talk to someone and the gate closed on the car. Another member backed a van into a light pole in a shopping center parking lot; you guessed it if you said no spotter was used and no one got out to look behind the van.

While none of our vehicle mishaps are exactly alike, and there are a lot of different factors at play, the majority can be traced back to a simple failure to apply risk management ... an awareness of what can go wrong and the desire to keep it from happening.

I ask all our safety officers to get together with your transportation officer and your squadron commander, and come up with a plan for how you can emphasize risk management in your vehicle operations. What can you do to set a high standard within your squadron on how your vehicles are used, and how your drivers can actively practice risk management while operating their vehicles?

"What can go wrong, and what am I doing to prevent it"