Safety Beacon
Official Safety Newsletter Of The Civil Air Patrol

August 2017

The Best Of …

As you read this we are in the final stages of preparation for the upcoming National Conference in San Antonio. I hope to see some of you there!

Rather than skipping a month of the Beacon, I decided to look back and pull a few articles from past editions. These articles are still applicable to many of the issues we continue to work, and hopefully will be good reminders for everyone.

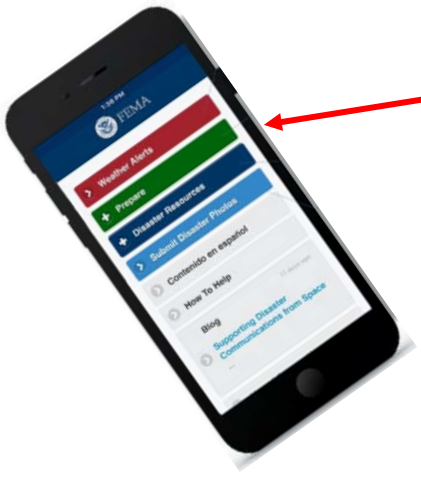
This morning I took a look at the hurricane and tropical storm outlook on the National Hurricane Center's website. As of the morning of August 17, Hurricane Gert had taken a right turn and was safely aimed for the North Atlantic, but there were three tropical waves coming off the coast of Africa and headed west. The outlook for the first one in the line had these foreboding words: *"…expected to bring the system through the Lesser Antilles and into the eastern Caribbean Sea in 24-36 h, into the central Caribbean by 72 h… favorable for strengthening, and the… models show slow, but steady, intensification."*

That should be and ample reminder that we have entered the Hurricane Season! September is "National Preparedness Month" so let's start with the feature below from the September 2016 Beacon….

National Preparedness Month

September is National Preparedness Month, and FEMA offers a wealth of information to help individuals, families, and communities prepare themselves for life's emergencies. Check out Ready.gov , a Department of Homeland Security website for all the information you need.

Click here!



Do you like apps for your smart phone?
Click on the smart phone and you'll have all sorts of preparedness tools at your fingertips.

These FEMA websites will provide the tools you need to stay prepared year around while providing some great informative briefing ideas for your monthly safety education briefings.

Share your ideas!
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Everyday Risk Management

'Don't Forget to Be Afraid'

By: George C. Vogt, CAP Chief of Safety

Last month we talked about looking both ways before you cross the street. That's a lesson we all learned as children, and it's a perfect example of how Risk Management is, and should be, a part of our daily lives.

This month I'd like to talk about a trait that comes naturally to children but we sometimes forget, or refuse, to use it as adults. Whenever small children face a new challenge, their first reaction is to be scared. A toddler is afraid to walk up and pet the big dog in the park. A young child clings to his parent when he sees a stranger. A small boy won't go close to the fire. A little girl won't jump in the pool unless daddy is there to catch her.

In each of these cases, it appears that the child has recognized that something could go wrong if they approached the "danger." As adults, we should teach children that recognizing dangers is good, and then we should help them think about whether or not that challenge they're facing is really as scary as they think, or if it can be made less scary.

All of this behavior, quite simply, is what we are teaching in Risk Management.

Let's look at that little girl who is scared to jump in the pool. There are very real dangers there. But what if her parents give her water wings or a life preserver, and show her that she can float in the water. Maybe they can get her comfortable splashing around. And maybe, just maybe, if daddy goes in the pool to catch her then jumping won't be so scary and she'll do it with a smile on her face.

You don't have to use your imagination to see a great example of risk management there. The water presents some very real hazards, and if she were to fall in, there would be a very real risk of drowning.

Before the child jumps in the water, that risk needs to be mitigated. Becoming acclimated to the water, wearing water wings, and having daddy in the pool to catch her, are the risk controls that reduce the risk to an acceptable level. Now she's ready to jump!

That is how we need to approach everything we do in our daily lives, and everything we do in the Civil Air Patrol. Risk management means recognizing hazards and taking the time to mitigate the risks.

Dr. James Reason, Professor of Psychology Emeritus at University of Manchester in England, is one of the foremost scholars in the discipline of safety psychology and risk management. He summarizes safety down to its essence when he writes, "In short, it means not forgetting to be afraid."

I can tell you the best pilots I've ever known are a little afraid (or a lot, depending on the mission) every time they go out to fly. But they use that fear to stay alert to the hazards and mitigate the risks. They ask themselves, "what can go wrong and what can I do to fix it?"

Carry this same attitude with you every time you push an airplane into a hangar. Every time you lead a group of cadets. Every time you set out on a ground search. Every time you cross the street. What can go wrong and what am I doing to fix it?

Above all else, don't forget to be afraid.

Note: This article is a reprint from January 2015. It's a timeless message. A "healthy fear" of what can go wrong will help you remain aware of the hazards and risks you always face.

Backing a Van is a Team Effort!

George Vogt, CAP Chief of Safety

Backing up in a van is the single most common cause of vehicle mishaps in the Civil Air Patrol. It seems like every weekend, especially during the busy summer months, a couple more reports of dented vans appear on my computer screen. The reason? "Somebody" backed the van into something that they didn't see.

CAPR 77-1 is pretty clear that the "use of a spotter is required when backing." The only exception to that rule is when there is nobody else available. In that case, the vehicle is supposed to be positioned "in such a way that backing isn't required"

So if the guidance is so clear, then why are we still having so many mishaps that involve backing, primarily in large vans? To be fair, vans are awkward to drive, and most of our members don't drive large vehicles like that on a daily basis. But if we already know there is a risk involved in backing a large van, and we know we can't see everything that is behind us, why aren't we doing everything we can to avoid these backing accidents??

Over the last couple months I've been to quite a few CAP events and watched as people tried to back up in their van, and I've seen some things that are a bit disturbing.

I see some people that aren't using spotters at all, even when they are available. I'm not sure if they think the regulation doesn't apply to them, or maybe they think they are so skilled that a spotter isn't needed. Either way, they are making a big mistake.

I've seen a couple cases where the driver asked one of the passengers to get out and be a spotter. The passenger hopped out, and the driver started backing, with no discussion of what the signals would be. In some cases the driver left the window rolled up and was unable to hear the spotter if he yelled.

I saw one case of a crowded van… The driver asked a spotter to get out and spot for him. Then the driver left his window rolled up. Meanwhile three people in the van were also "helping" by giving the driver instructions. He didn't hear (or see) the spotter yelling, "STOP!!!"

You get the idea. Van backing can be a hazardous activity, and you simply aren't respecting the risk enough if you aren't treating the movement of a van the same way you treat the movement of an airplane. Develop your own van-movement checklist. Here are a few ideas:

1) Do a walk around. Determine whether or not there are any obstacles, and determine the best route.
2) Appoint a spotter. Review signals for left, right, and stop! Roll down the window so you can hear them yell in case the signals are messed up.
3) Demand a sterile "cockpit." Tell your passengers you need them to be silent, and to keep an eye out for hazards so they can yell "stop" if they see something.

Backing up in a CAP van is a team effort, and that team work has to start long before the vehicle is put in motion so you can avoid some of the damage you see on this page. I'd like every unit to come up with a simple checklist like this so every vehicle movement is a team effort and we can put a stop to those nagging, expensive, fender benders.

"Somebody" drove into this

"Somebody" backed into this

Don't be a "somebody"

Note: This article was from the June 2015 Beacon. Large CAP vans (and even the small ones) can be a challenge to maneuver if you're not used to driving one. Before ANYONE puts a van in motion, they need to be confident that there is nothing blocking their way. Use a spotter. Do a walk-around. Ask for help.

Note: We get the most comments about some of our short topics in the Beacon. This one is still very timely. I regularly see mishaps reviews or comments from leaders who say the reason for the mishap was a lack of "common sense." When we bring diverse people into varying locations for interesting new missions, they have little in "common" so how can they have "common sense?" This short piece is from the February 2016 Beacon.

Common Sense?

"He should have used common sense!" That is one of my least favorite phrases in safety, and unfortunately I hear it way too often. I even see it from review officers and commanders who say the reason a mishap occurred is because the victim didn't use their "common sense."

What is common sense? I like the definition provided by Dr. Jim Taylor, Professor of Psychiatry at University of San Francisco in an article he wrote for *Psychology Today.* He defines common sense as "sound judgment based on experience rather than study." I've also heard it defined a little more humorously as *"the knowledge and experience most people have, or which the person using the term believes they should have."* It's used primarily by Monday morning quarterbacks.

Dr. Taylor goes on to point out that "common sense is not common." It assumes a common shared set of experiences. Let's look at a CAP example. We might have an NCSA with CAP cadets from all over the country. Different surroundings. Country or city. Different upbringing. Different schooling. When they get together and see an obstacle course for the first time, or prepare for their first orientation ride, they don't have "common sense;" they have common ignorance. They have never even seen, let alone experienced, those things before. WE need to steer them through an understanding of the hazards and the risks they face, and teach them how to keep themselves safe. Risk management must take the place of "common sense."

Another big problem with using the term "common sense" comes when we're trying to determine what caused the mishap. If a supervisor attributes the mishap to "lack of common sense" he has stopped the process of reviewing the mishap to find what caused it. He has stopped the learning process. We have basically *blamed* the person for not using common sense.

There is no room for blame in mishap reviews, and there is no room for a cliché that stops us from looking at the true mishap causes.

Remember, common sense isn't common.

Note: The single most common problem when we see minor mishaps, is that members don't tell us how a minor injury occurred, or why. The sole reason we report mishaps is so we can learn what causes the mishaps in hopes of preventing similar mishaps in the future. Identifying the hazards led to an injury will help us deal with those hazards in the future. Tell us the whole story. *Another interesting note? I went through 2 ½ years worth of Beacons, and this same request/advice/direction is given in half of the issues!* This short topic appeared in the July 2016 Beacon.

"This Resulted in "That" Which Resulted in "This"

We've given a lot of pointers on how to input mishaps in SIRS, and how to explain what might have caused the mishap. Here are a couple more pointers on how to enter those minor bodily injuries.

When you write down what happened as you enter a mishap in the system, don't just tell us the result. Tell us what caused it. A quick shorthand method? You start with the format of "THIS resulted in THAT."

Example: Tripping over the curb resulted in falling and skinning a knee.

But that doesn't tell the whole story of "why." An even better method? "THIS resulted in THAT which resulted in THIS."

Example: Hurrying to drill practice without paying attention *resulted in* tripping over the curb *which resulted in* a fall and a skinned knee.

NOW you've told us what happened, how it happened, and why!

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"How Am I Supposed to Know?"

A relatively common minor mishap we see, and the type of minor mishap I'd most like to reduce, is this scenario: Cadets show up at their unit meeting after a long day at school, after completing their after-school activities, after doing their homework. Tonight is testing night; the night that they perform the several events that make up the CPFT along with the mile run. Occasionally a cadet feels ill, or faints, or drops out of the run and the mishap review determines that they hardly drank water all day, skipped lunch to study for a test, and missed dinner.

In some cases, the squadron leadership is at a loss for how to prevent this. "How am I supposed to know if they ate or drank that day?" is a common question I hear from squadron commanders or cadet leaders. It is not enough for leaders of our cadets to ask "how am I supposed to know." They must also try to answer that question.

One suggestion that has met with success in many squadrons is to use your cadets to lead your cadets. Some squadrons have set up a recall the night before PT where cadets call cadets to remind them to be well-rested and prepared for the next day's PT events. Some squadrons have instituted a wingman approach to PT prep…cadets are paired up to remind each other and help each other prepare. When cadets walk in the door for their evening meeting, nutritional snacks and water are available. These methods work well for all types of cadet events.

Finally, as you have read in the earlier articles, a "sub-activity … safety briefing" is required before PT. That is our last chance to ask each cadet if they feel well, and if they are prepared and ready to go with no pre-existing conditions that might lead to problems.

"How am I supposed to know?" There are ways. Trust me, there are ways.

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Note: The above short article appeared in the October 2016 Beacon. It's a pretty common scenario, with senior members continuing to say they simply don't know how to ensure their cadets are ready for the strenuous activities at the unit meetings. "How am I supposed to know?" is a common question. I recently saw a mishap involving a similar set of circumstances that involved a cadet passing out at the beginning of a day-long activity. The wing commander, in his comments, wondered how they could deal with something like that. Here is an excerpt from an e-mail I wrote to the wing director of safety addressing that very issue:

" … the case of a cadet fainting at the opening of a daylong event, after having no breakfast, then a donut at the event, and nothing to drink. It was sent back for review. [The wing commander] said there is no way they can know what a cadet had to eat or drink. That is where this mishap review breaks down. You CAN know. You can send something to cadets and parents the night before the event. Make preparation part of the event plan. You can have the senior cadets remind the young cadets. You can have something other than sugary donuts as the food provided for the cadets. Everyone drinks before the event starts. There are a lot of ideas on how we can help prevent, or at least minimize, something like this, and that is what we are looking for. A good, lasting, preventive action would be to work with the Deputy Commander for Cadets to come up with a program that will help monitor and remind cadets of nutrition and hydration before day-long events."

Do your best to "know."

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Note: This article was from the front page of the May 2015 edition of the Beacon; an edition devoted to establishing personal limits. We all have different capabilities and limitations. Being alert to our own "weaknesses," and sharing those with our wingman, is part of Everyday Risk Management.

Know Your Limits

George Vogt, CAP/SE

This month in the Beacon we are focusing on establishing our own personal limits. We have a couple excellent articles about how to set your own personal minimums as a pilot. We need to use the same approach in setting, and respecting, our own personal limits regardless of what we are doing.

In the Civil Air Patrol, we take the time to do a good hazard assessment and risk mitigation before our flights, our searches, our exercises, and our cadet activities. We look at the weather, we look at the terrain, we look at our equipment, and we look at our tasks.

We analyze how the heat can dehydrate us. We analyze how easy it is to slip on the ice, mud, or uneven terrain. We know that sharp tools can be a hazard on the ground and we know that low ceilings can be a hazard to flight. We follow strict procedures when operating on a flight-line. We follow our Risk Management checklists and we do our best to mitigate the risks for everyone involved.

But we have a tendency to look at these hazards and risks only in the context of the group, since most of our activities involve a team, a group, a squadron, or a unit. How many of us stop to assess our own personal limits? That part of risk mitigation is often over-looked when we are acting as a part of a group, but each and every one of us are responsible for honestly assessing our own strengths, weaknesses, and tendencies.

Personally, I have a tendency to get dehydrated easily, so I make sure I bring extra water. I hate to be labeled a quitter, so I have a tendency to press on with the task at hand even when I'm over-fatigued. That can lead to a mishap. I recognize those "weaknesses" and I'm alert to their warning signs. In the Air Force, aircrew members go through altitude chamber training. The primary purpose of that training is to help teach them to recognize their own personal symptoms of hypoxia (low oxygen levels in the blood). As that altitude chamber training points out, we're all a little bit different, we all have our own "symptoms," and we all have our own strengths and weaknesses. We must recognize our own tendencies, be alert for our own "symptoms," and mitigate the risks they bring.

Don't keep these tendencies or "symptoms" to yourself. Do you suffer from asthma? Do you carry an EpiPen? Are you recovering from a sprained ankle? Share that information with your wingman so you can both be aware and you can help protect each other. Discuss them as a group during one of your monthly safety meetings so you can all help each other be stronger members of the team.

As a group, we do a pretty good job of assessing hazards, mitigating risks, and keeping our operations safe as a team. One of the biggest contributions you can make to the team is to know your own limits, and keep yourself safe, so you can continue to be an important part of the day's mission.

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Note: With a bit of a background in Psychology, I am intrigued with how our minds can play tricks on us when we're faced with stressful situations. Conversely, our minds can also be our greatest tools if we understand the "human factors" affecting us and use predetermine processes to help us manage our thoughts, our plans, and our actions in those situations. This "academic" article is from the June 2016 Beacon.

TRAIN YOUR BRAIN!

Humans as Hazards?

George Vogt, CAP/SE

Human Factors

All of us have heard of Human Factors in the context of safety, and most of us have read articles or sat through lengthy lectures on Human Factors. In short we learn about all the ways that different physiological and psychological traits of the human can be a factor in mishaps and safety.

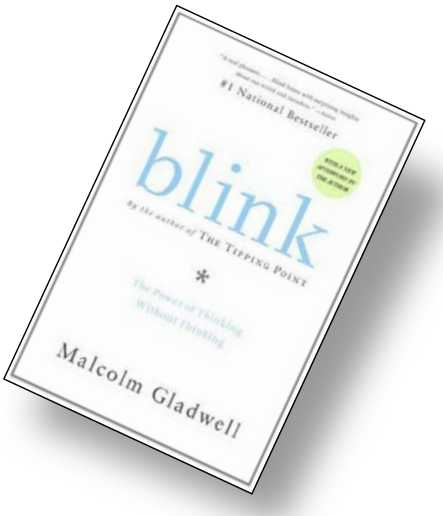
We learn that fatigue can affect our decision making. Complacency can result in reduced attention to hazards and risk. Flying across time zones can affect our circadian rhythms. Poor ergonomics and the way we function in our cockpit can reduce efficiency and crew coordination. Going even further, we learn how our mind actually functions (or malfunctions) when confronted with difficult decisions, and how we interpret large amounts of information.

We can begin to get concerned that our own body and mind are ultimately one of the greatest hazards we face when we fly. I look at human factors a slightly different way.

The study of Human Factors makes us aware of the "hazards" that the body and the mind present. Understanding those "human factors" allow us to analyze each of those "factors" the same way we would analyze any other hazard -- through the deliberate process of risk management. Identify the hazard, assess the risk, determine the proper risk controls, and apply them.

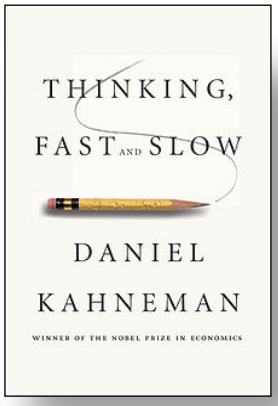
FAA Safety Briefing

In an excellent article in the Postflight column (pg 36) of the May/Jun issue of FAA Safety Briefing, Susan Parson writes about Human Factors. For those who don't recognize the name, Capt Susan Parson is the CAP National Stan/Eval Officer. In her "daytime" job she is (among other things) Editor of the FAA Safety Briefing. In her article she references a book entitled ***Blink*** by author Malcom Gladwell. Part of the premise of the book is that the mind takes in and processes an exceptionally large amount of information in a very short amount of time, sometimes interpreting it correctly, and sometimes not. This is especially true in this modern era of stimulus overload that seems to come with electronic cockpits and computerized flight bags. The take away is that sometimes, when the brain is doing its best to keep up, it will give you little signals like "this doesn't look right" or that "gut feeling" you get when something is wrong. You need to respect those feelings and analyze what you're seeing.



Thinking Fast and Slow

This reminded me of another author with similar thoughts. Daniel Kahneman is a Nobel Prize winning Economist, but his book ***Thinking Fast and Slow*** contains insights that translate well into the world of safety. I realize the dangers of paraphrasing and explaining complex concepts in a very short space, so I confess that I am oversimplifying some of his concepts for this article.



Dr. Kahneman describes two modes of human thinking as "System 1" and "System 2." System 1 is the constant on-going interpretation of what is going on around us, leading to instantaneous "snap" decisions. We see this as "thinking fast" but we have to realize that some of these decisions are based on past experiences, biases, old habit patterns, and "what worked last time." Systems 2 is the slower, deliberate thought process we employ when we need to solve a problem or plan a complex task.

Much like the quick thinking described in *Blink,* we must be aware of this tendency to jump to conclusions and take the time to think through our options and come up with the best course of action.

Knowns and Unknowns

The need to slow our thinking and do a methodical analysis of the task at hand and its hazards, reminds me of a famous quote by former Secretary of Defense, Donald Rumsfeld. It's a well-known concept in psychology, and may be a bit out of context for this discussion, but I think about it when I teach people about the need to do a thorough hazard analysis as the first step of every Risk Management process.

Secretary Rumsfeld described the idea that in every situation we face there are "known knowns," there are "known unknowns," and there are "unknown unknowns." These concepts can be a shorthand method of identifying our hazards while we're performing our risk management planning.

"Known knowns" are those things we know we know. In a flying environment, I might know I'm going to fly a C-182, I know I am proficient in that airplane, and I know who I'm flying with for this mission.

"Known unknowns," are those things we know we don't know. In this example, I know that I don't know the weather at my destination. I need to find that out. I know I need to find out if there is any severe weather enroute.

The most difficult to deal with are the "unknown unknowns." These are the hazards you're not yet aware of and you won't know about until you do some thorough hazard analysis of the event you're planning. Analyzing the plan, the equipment, the personnel, and the venue while brainstorming and playing "what if" will help you identify *all* the hazards you will face.

Does all this sound familiar to you? I hope it sounds like the thorough risk management planning you do before *every* flight and *every* activity. We aren't just satisfied with the "known knowns" we remember from doing a similar task a hundred times. We must take the time to make sure we know all there is to know about the hazards and risks we face before we begin.

HUMANS AS HAZARDS?

The tendency when we talk about Human Factors is to dwell on the frailties and weaknesses of the human body and the human mind until we look at Humans as Hazards. I prefer to think of these "Human Factors" as just one more type of hazard we face. If we are aware of those hazards, and we use the process of Risk Management to analyze and mitigate, then we avoid the idea of Humans as Hazards and begin to think of Humans as Heroes.

Humans as Heroes!