SafetyMatters

SECOND QUARTER **2021**

A quarterly, collaborative publication from MedFlight and HealthNet Aeromedical Services

Spring into Safety

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Winter has given way to spring which brings with it unpredictable weather, more motorcycles and bicyclists on the roads, children out playing, and migratory birds making their way back to Ohio. Even though our seasons may change here in the Buckeye State, a constant with MedFlight is maintaining our safety practices as we transport our patients by air or ground.

The Smithsonian's National Zoo & Conservation Biology Institute (2021) indicates spring is the optimum period for migratory birds traveling from the warmer winter climates to the northern parts of the country, including Ohio. With this migration there is an increased potential for bird strikes on not only our helicopters but our ground transport vehicles as well. In addition, these migratory birds will be building their nests, and they are very quick at this task. So be very diligent when performing the helicopter walk-arounds looking for not only HOLDS (hanging, open, leaking, dripping, seeping) but pay special attention to the engine compartment as we see birds routinely trying to build nests in our helicopters.

Spring brings nourishment and moisture to the earth, but these rainy days can add driving hazards for ground crews. The Safety Resource Center (2020) lists wet roads, potholes, and oil slicked roadways as the main causes of spring related crashes. Wet roads increase the likelihood of sun glare (most often seen during sunrise and sunset) and is a leading factor for accidents as the sun is directly in the line of sight when it is low on the horizon. Make certain that the windshield is clean and that you use polarized sunglasses for driving. The freezing and thawing of roadways over the winter months produces our spring potholes that pose a significant driving concern for ground transport vehicles. These potholes can be deceiving in their depth so best practice is to avoid driving over them. Be especially cautious for the motorcycles, bicycles, and wildlife as their low profile and quick movement may make it difficult to see as they cross your driving path. Understand that dawn and dusk are the busiest time for wildlife movement.

Remember to be more diligent in walk-arounds, be cautious while driving, and watch out for everyone sharing the highways and skyways. We all play a part in safety for ourselves, our teams, and our vehicles as we leave winter behind and look toward the new horizons of spring.■

Sources:

Smithsonian's National Zoo & Conservation Biology Institute, (2021). *The full annual cycle of migratory birds.* Available: https://nationalzoo.si.edu/migratory-birds

The Safety Resource Center, (2020). *New seasons, new dangers to be aware of.* Available: https://www.trafficsafetystore.com.

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Illicit Drug Exposure in Healthcare

By Jeff White, M.S., MTSP-C, FP-C
Director of Safety, HealthNet Aeromedical Services

Over the last several years there has been an increase in potential exposure to various drugs or synthetics from items like one-pot methamphetamine labs, synthetic designer drugs, and medications used in veterinary medicine. We train and discuss these issues as much as we can to maintain situational awareness, but how do we develop a response safety and mitigation plan for these incidents?

Fortunately, there is guidance documents and standards that can be utilized in this process. OSHA recently published a technical document entitled “Controlling Occupational Exposure to Hazardous Drugs” which contains the most recent NIOSH List of Antineoplastic and Other Hazardous Drugs in Healthcare Settings, 2014. This list was produced after NIOSH, the FDA, and OSHA undertook a biennial review of old and new drugs, classified them in a consensus process to their degree of hazard and usability, and posted the list through a systematic process. As a safety professional you may also utilize 29 CFR 1910 Subpart Z, 29 CFR 1910.1020, 29 CFR 1910.1200 and 29 CFR 1910.1450 as additional references when creating response and mitigation plans.

The goal of any plan is to minimize the risk of exposure to a level that is as low as reasonably acceptable. For example, we know there could potentially be a one-pot meth lab in a car from which we are extricating a patient. However, we should try to limit contact with the bottle by either removing it from the vehicle or covering it to prevent puncture and release of chemicals. The challenge comes from early identification. Even if you have had training, could you recognize one in the field?

Another concern is drugs in a powder form. Once that powder becomes aerosolized the exposure risk to anyone in the area is drastically increased. Many of these types of drugs are kept in plastic wrap or a sealable type of bag. If you expel the air out of the bag to fit it into another container, you run the risk of aerosolizing the powder. In those instances, we should treat the container as we would a leaking chemical container in a hazardous materials event. It should be “overpacked," in other words, put into another container in a manner that prevents any of the powder from becoming aerosolized.

Lastly, we need to think of those patients that may have this residue on them. Those that are now in the confined space of an ambulance that may be “off gassing” any liquid or will have powder on their clothes that can be aerosolized in the ambulance. Insurance of a good decontamination process on scene, or once arriving at a facility will minimize the risk that all healthcare providers.

With the ever-changing illicit drug environment, we will always be playing catch up. However, a good base knowledge and strong mitigation plan will lead to an increased chance of exposure being kept to a minimum ■

The "one-pot" or "shake and bake" meth making process utilizes portable beverage containers.

Cognitive Biases that Lead to Unsafe Actions

By Lynn Gilmore, CSP
Safety Officer, MedFlight

Have you ever thought, "Oh, that won't happen to me," even if statistics say it's likely? Do you always take the same route home from work, even though there might be other, better options? Have you skipped wearing sunscreen because just a couple of hours of sun won't do much harm? If so, you've operated from an unconscious cognitive bias (specifically, the bias of ignoring the baseline, the default bias, and the bias of underestimating cumulative risk).

When humans make decisions, we follow all kinds of assumptions based on what has happened to us before, what others have told us, and what we see right in front of our eyes. Without our natural biases, we wouldn't really be able to function, as we wouldn't be able to make any decisions at all.

Sometimes, though, our biases pose a danger to us, by leading us to act in unsafe ways. To be safer at work, we have to be consciously aware of our biases and act against them when needed. And yes, this applies to both management and workers.

Let's take a closer look at seven cognitive biases and how they can lead to unsafe work.

#1: Overconfidence Bias

Hardly anyone considers themselves overconfident, but nearly everyone is. Most people believe they are more agile and smarter, as well as better at most tasks, than they actually are.

As an example, do you believe that you are an above-average or below-average driver? No less than 93% of people who respond to that question say they are above average—and surely half of them are wrong. In the workplace, overconfidence translates to doing things like skipping safety processes, assuming we can work as safely at 4 p.m. as we did at 10 a.m., ignoring the fact that the floor is understaffed that day, not getting help when we need it, assuming we know how a machine functions under all conditions—the list goes on and on. In short, overconfidence leads us to skip best practices we know we should do. The worst thing about overconfidence is that you get positive reinforcement all the way up until disaster strikes. If you're doing something in an unsafe way, and you do it 500 times without injury, you start forgetting that it's unsafe. Then you get to 501.

#2: Ignoring Blind Spots

A worker uses a knife to trim the excess off an extruded plastic part. Her attention is on her knife, on the part she is holding, on the speed of the line. Without looking, she puts her hand down to grab a clamp—unaware that another worker has left an open knife on the table. When she cuts herself, she is the victim of a cognitive bias that assumes nothing has changed in the environment to endanger her. Never before has a worker left a knife there—so her habituation to the environment has caused a blind spot.

Blind spots make us vulnerable and can be caused by any number of factors. For instance, sometimes obvious dangers can cause blind spots to less obvious dangers.

#3: Confirmation Bias

The confirmation bias, as defined by Scott Plous in The Psychology of Judgment and Decision Making, refers to the natural human tendency to "search for, interpret, favor, and recall information in a way that confirms our pre-existing beliefs or hypotheses."

In other words, we often see only what we expect to see. With the confirmation bias, not only do we see what we expect to see, but our pre-programmed brains actively ignore anything that contradicts our first assumptions.

#4: Ignoring the Baseline

All of us tend to think that our own circumstances are somehow unique, and we tend to ignore the typical statistics governing our activities. That includes accident rates. This cognitive bias is known as "ignoring the baseline." More than ignoring the baseline, we are often in active denial about the baseline. Even though workers have heard about their fellows developing serious conditions from, say, handling fiberglass insulation without gloves, they continue to do it—assuming, somehow, that it won't happen to them. Accidents and injuries can happen to anyone, including you and your workers.

#5: Default Bias

Whenever a choice is presented to us, we tend to choose the defaults—it's not just easier and quicker, but we assume that the defaults are somehow the safest bet. That means that when a worker approaches a task or a machine, they always tend to look for the defaults—whether someone else has explained the other options, or not. Because of this bias, we must be very thoughtful in what is established as the default. For instance, if you have five different kinds of safety gloves available in the workplace, you need to make it absolutely clear which are the default gloves for a particular kind of work. That might mean a big picture of the

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default gloves next to a particular machine, or better yet a rack with those specific gloves placed next to the machine.

#6: Underestimating Cumulative Risk

Humans tend to vastly underestimate cumulative risk—the things that are harming them slowly, over time. Everyone knows the fable about frogs and boiling water. If you drop a frog into a pot of boiling water, it will jump out safely. But if you put the foolish amphibian in cold water and boil it slowly, it will not recognize the danger in time, and it will die. Unfortunately, this analogy can be applied again and again to work safety. People handle "just a little bit" of a dangerous chemical every day until they develop skin conditions or neurological issues or cancer. People use vibration tools which are causing neurological damage over several years without noticing until it's too late. Gloves wear thin and get holes, but people keep on using them. If these gloves had been issued on day one, they would never have been accepted.

#7: Recency and Availability Bias

The recency bias, also known as the "availability bias" of the human mind means that we tend to focus on top-of-mind, recent events, with lots of readily available information, giving them more importance than they deserve. The recency and availability bias means that we are always looking at the immediate past for answers, instead of looking forward. If somebody loses a finger working with a harvester on a farm, everyone is going to be very careful around harvesters for a while. Attention will be paid to new gloves, guardrails, and protocols around harvesters. Meanwhile, workers are deploying pesticides bare-handed, they're fiddling with open tractor engines while the tractors are running, and they're operating power takeoff flywheels without any training. The lost finger is a tragedy, but it could be an outlier injury, not a danger faced by many workers in every shift. Indeed, dangers may become hidden by the focus on this recent event, as no overall hazard assessments are taking place.

TRAIN YOURSELF TO COUNTERACT YOUR BIASES

These cognitive biases are largely unconscious. They happen instantly, without thinking. But that doesn't mean that we are helpless against them. We can overcome our biases with conscious thought. Simply by being aware of these common biases, we can begin to counteract them. Where safety is involved, we must pause, ask ourselves what biases might be at play, and question whether those biases could be leading to unsafe behavior. We can then take different actions, ensuring a safer work environment.■

Adapted from *Rethinking Hand Safety*

Thoughts on COVID Vaccination

By Howie Werman, Ashely Larrimore and Bradley Raetzke
Medical Directors, MedFlight/MedCare Ambulance

As health care providers, we have had the opportunity to see many individuals receive their COVID-19 vaccine. Two observations: first, it is an incredibly liberating feeling to be vaccinated, understanding that the risk of hospitalization, ICU admission and death are nearly non-existent for vaccinated individuals. The second and more clinical observation is that the vaccine is incredibly safe - the incidence of severe allergic reactions is somewhere between 1-5 per million doses administered (these can generally be anticipated). There have been virtually no long-term adverse effects with the Pfizer and Moderna mRNA vaccines which is different than, for example, the flu vaccine that we take annually.

Knowing this, it is distressing to see the number of COVID-19 cases continue to climb as more vaccine doses become available. It is particularly distressing to see the number of health care professionals who remain unvaccinated, despite being prioritized in the vaccine rollout.

Some folks view this as an individual decision and if so, there is enough compelling evidence that as individuals you should opt to get vaccinated. However, as health care workers we have also taken on an additional responsibility - to our patients and to our fellow health care providers. Think about the implications if you are unvaccinated and develop COVID-19 or COVID-like symptoms. For MedFlight and MedCare, this means that there is the potential that for up to 10 days, another partner will have to be found to perform the work for which you committed. This may also mean that a base might have to be closed, resulting in either the inability to move or to delay the transfer of a critical patient.

To those folks who have received their vaccinations, we thank you. For those who have not gotten the vaccine, please consider the individual and community benefits of doing so. As always, we would be happy to discuss any concerns that you have about the vaccine.■

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