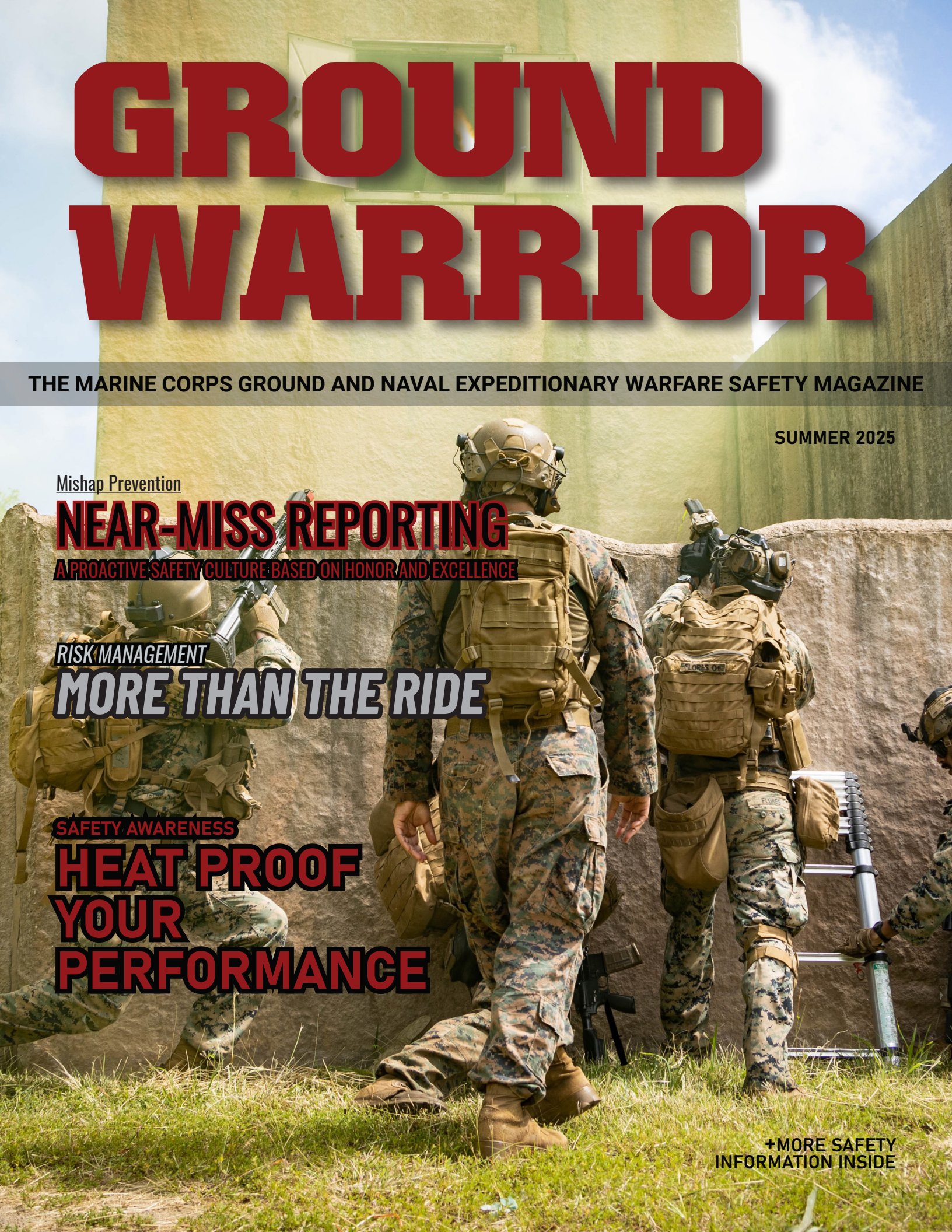
GROUND WARRIOR

THE MARINE CORPS GROUND AND NAVAL EXPEDITIONARY WARFARE SAFETY MAGAZINE

SUMMER 2025



Mishap Prevention

NEAR-MISS REPORTING

A PROACTIVE SAFETY CULTURE BASED ON HONOR AND EXCELLENCE

RISK MANAGEMENT

MORE THAN THE RIDE

SAFETY AWARENESS

HEAT PROOF YOUR PERFORMANCE

+MORE SAFETY INFORMATION INSIDE

A Letter from the Director
Commandant of the Marine Corps - Safety Division

Marines, Sailors, Civilian Teammates and Families,

As I conclude my time as Director of Safety Division, I want to take a moment to express my sincere gratitude for the opportunity to serve alongside each of you. It has been an honor to lead this important division and while I am moving on, I remain deeply proud of the work we've done together.

When I first assumed this role, I stressed the importance of adapting to the evolving challenges we face. As the Marine Corps continues to transform through Force Design initiatives and address new threats, ensuring safety remains a core component of our operational readiness is more important than ever. Safety is not just about compliance; it's about fostering a culture of protection, awareness and continuous improvement. The Safety Division has worked tirelessly to create a "just," "learning" and "reporting" safety culture prioritizing the well-being of our Marines, Sailors and civilian teammates.

One of our key efforts has been leveraging mishap data analytics to gain deeper insights into the risks we face across the Corps. By analyzing trends and identifying potential hazards we are now in a better position to proactively address issues before they lead to mishaps. But data alone is not enough. We have worked to share these insights across the service, ensuring lessons learned are passed on and that every command has the information they need to make informed decisions and improve safety outcomes. By fostering this data-driven approach, we are not just reacting to incidents, but actively learning and evolving to prevent them.

The initiatives we've put in place—from improving hazard reporting, to aligning ground and aviation safety cultures, to expanding Safety Division's support across the Corps—have laid a strong foundation for continued success. The next leader of Safety Division will inherit a team and system well-positioned for even greater achievements and I am confident they will build upon this progress.

Though I am stepping away from this role, the responsibility for safety remains with each of you. Leaders at every level must continue to prioritize risk management, maintain high standards and ensure safety is deeply embedded in our daily operations. There is no such thing as an acceptable loss and we must remain committed to preserving life and maintaining the readiness of our Corps.

Thank you for your professionalism, dedication and hard work. It has been a privilege to serve with you all and I am confident the next chapter for Safety Division will be one of continued excellence.

Semper Fidelis

Douglas "Swami" Sanders
Brigadier General, United States Marine Corps
Director, Commandant of the Marine Corps – Safety Division

A Letter from the Commander
Naval Safety Command

Marines, Sailors and Civilian Professionals,

At Naval Safety Command, one of our objectives is to prevent mishaps and save lives. As a learning organization, one of the most successful ways we do this is by sharing information. Ground Warrior Magazine is one of the many resources we have available to help us gain valuable information from each other about mishaps and near misses.

I encourage you to take the time to read the articles in this edition and apply what you learn to your on and off-duty daily routine. Sharing the lessons learned from a given taskhelps us increase the overall safety of our warfighters across the Navy and Marine Corps.

Since taking the baton as Director for Commandant of the Marine Corps-Safety Division, Brig. Gen. Sanders has paved the way for further collaboration and has strengthened our assurance assessments program with the end goal in sight of ensuring leadership drives risk management efforts, so Marines are safe to operate and operating safely.

Over the past several months, we have supported our fellow Marines as they conduct Tier I assurance assessments of their Marine expeditionary forces, as well as Local Area Assessments (LAA) across Marine Corps air stations. Upcoming events include the III MEF assurance assessment and an LAA at MCAS Camp Pendleton. Our assessments are a major element aligned under the Navy's Safety Management System.

Another topic that weighs heavy on my mind is motorcycle safety. The upward trend of crashes causing fatalities and injuries is detrimental to our readiness, regardless of service. There is the emotional effect on fellow Marines and Sailors who lose friends and teammates as well as the overall impact to mission readiness. Poor decision-making, reckless behavior and excessive speed dominate the underlying factors leading to these crashes. We need your help! Mentorship is critical to our efforts to prevent crashes. The Marine Corps' Motorcycle Mentorship Program helps save lives and is covered in detail on Page 10.

I am grateful to Swami for his efforts as we continued to strengthen the bond between our blue/green team, and I look forward to continuing to build on our success with Brig. Gen. Hoewing.

Our commitment to the Marines and Sailors who serve worldwide is enduring. You are needed to complete the mission.

Warfighting First!

Dan "Dino" Martin
Rear Admiral, United States Navy
Commander Naval Safety Command

GROUND WARRIOR EDITORIAL STAFF

Front cover: U.S. Marine Corps students with School of Infantry-West, Advanced Infantry Training Battalion, Detachment Hawaii, carry out close quarters combat operations during the Advanced Infantry Marine Course at Bellows Air Force Station, Hawaii, March 12, 2025. (U.S. Marine Corps photo by Cpl. Matthew Benfield)

Back cover: U.S. Marines and Sailors with the 1st Light Armored Reconnaissance Battalion, attached to Marine Rotational Force-Southeast Asia, conduct a patrol in Sattahip, Thailand, Feb. 26, 2025, during Exercise Cobra Gold 2025. (U.S. Marine Corps photo by Sgt. Christian Tofteroo)

Ground Warrior Magazine is a forum where Marines, Sailors and civilians can share safety-related experiences, thereby providing valuable lessons learned to others. Input from the fleet is crucial to improving safety culture, conducting safe operations and thus maintaining readiness. Ground Warrior is published jointly between the Commandant of the Marine Corps Safety Division and the Naval Safety Command. Content within Ground Warrior does not necessarily represent the official views of, nor is it endorsed by, the U.S. government, Department of Defense, U.S. Navy or U.S. Marine Corps. Photos and artwork may be representative and not necessarily show the people or equipment discussed. The Ground Warrior editorial staff reserves the right to edit articles for readability. Reference to commercial products does not imply endorsement. Unless otherwise stated, content may be reprinted without permission by giving proper credit to the magazine, author and photographer when applicable.

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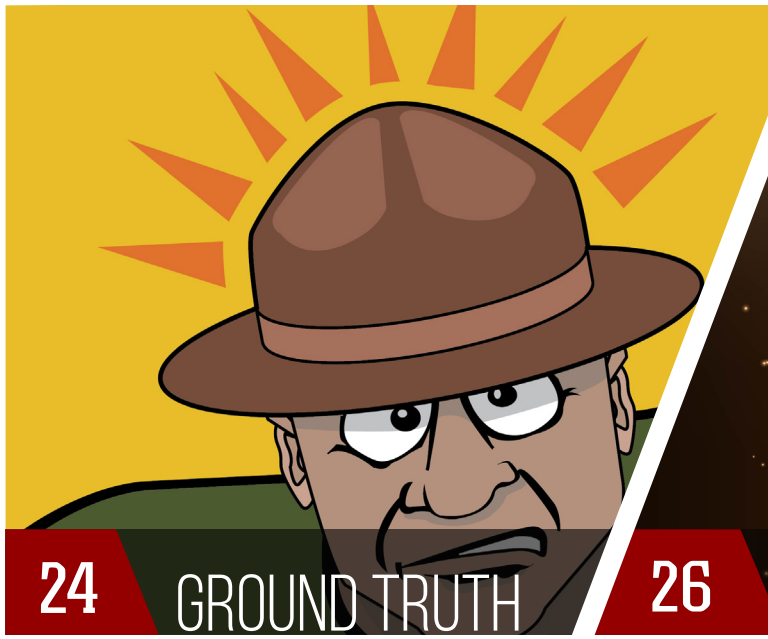

FEATURES

ENCOURAGING NEAR-MISS REPORTING IN THE MARINE CORPS

Photo: U.S. Marines with Aircraft Rescue and Fire fighting, Headquarters and Headquarters Squadron, Marine Corps Air Station Miramar, spray water on flames coming from a mobile burn unit during an aircraft mishap full scale exercise on MCAS Miramar, San Diego, California, Aug. 17, 2022. This emergency response exercise was conducted for first responders to maintain proficiency and preparedness for potential real-world threats and hazards on the installation.
(U.S. Marine Corps photo by Lance Cpl. Jose S. GuerreroDeLeon)

By Major Kevin Stephensen

Human factors are the leading cause of on-duty ground mishaps.

Think back to Boot Camp or Officer Candidate School. If a mistake is made, what happens next? After arriving in the fleet, when a mistake is made, what happens next?

The number one causal factor of on-duty ground mishaps is human factors.

This means mechanical failure, the environment or procedures might be a contributing factor, but at the end of the day, most incidents are due to somebody making a mistake or not making the best decision. In an honor-based society, it takes moral courage to own up to making a mistake. Suppose you are the leader of someone who made a mistake. In that case, balancing justice, keeping a healthy reporting culture and handling the situation can be challenging.

In the Marine Corps, a unit's safety culture is typically measured through the Command Safety Survey, a command culture workshop, great use of the Risk Assessment Matrix, solid risk management or a unit-mishap rate based on mishaps per 1,000 personnel. Although these are great tools, this article provides a series of questions to reflect on the effectiveness of the organization's safety culture.

Countless books are written on organizational culture, leadership and how to change an organization. Trust and valuing others' input are often key factors in this type of literature. So, how does the Marine Corps measure these attributes in its safety culture and willingness to report?

If a unit is willing to report near-misses in the form of a Hazard Report (HAZREP), it is one of the most significant indicators of a healthy safety reporting culture.

"Culture Is The Way Work Gets Done." Bob Conway, NASA Safety Center Deputy Director

Often, commands think of reporting in the form of Operational Report 3, Commander's Critical Information Requirements and Safety Investigation Reports. However, reporting in the safety chain might not meet those reporting thresholds, so a command may unknowingly miss opportunities to share lessons learned, especially if it is a near-miss. A near-miss could be an unreported vehicle rollover because it didn't meet a damage threshold requiring reporting to a higher authority. However, if everyone doesn't understand why this occurred, the following incident at the same location under similar circumstances could have been fatal and could have been prevented if a near-miss had been reported. This is the purpose of the HAZREP.

A HAZREP is a mishap prevention tool submitted by the unit safety officer in the Risk Management Information (RMI) system to identify or highlight an existing hazard with the potential to cause mishaps within a military occupational specialty (MOS) community or service. The purpose is to notify adjacent, affected or service-level commands of hazards or incurred risks. These reports should be completed no more than three days after the hazard identification. However, if this timeline is not met, reporting as soon as possible is still highly encouraged.

The Marine Corps is driven by honor, integrity and the responsibility to protect one another. These values go hand-in-hand with maintaining the highest standards of readiness and safety. One of the most effective ways to enhance unit cohesion, improve operational readiness and strengthen the proficiency of every Marine is through encouraging near-miss reporting. When Marines report near-misses and incidents where an accident could have occurred but didn't, they take proactive steps to prevent harm, identify areas for improvement and ultimately contributing to a more effective and resilient force.

A U.S. Marine with the Maritime Raid Force, 31st Marine Expeditionary Unit, jumps from a CH-53E Super Stallion during bilateral helocast training for Iron Fist 24, off the coast of Okinawa, Japan, March 10, 2024. An effective, preventative measure for mishaps is training, ensuring our service members are prepared to operate under any circumstances and in any operating environment.
(U.S. Marine Corps photo by Cpl. Tyler Andrews)

While it can be difficult to report human errors due to the Marine Corps honor-based culture, embracing near-miss reporting with the right mindset can lead to growth. It fosters a culture of trust, accountability and continuous improvement benefiting everyone. By focusing on how reporting near-misses strengthens our teams, improves Standard Operating Procedures (SOP) and sharpens MOS proficiency, we create a feedback loop enhancing unit readiness and ensuring every Marine is prepared for success.

1 Create a Culture of Trust and Respect
When Marines feel trusted and respected, they are more likely to contribute to a unit's success—especially regarding safety. A culture where near-miss reporting is encouraged allows Marines to learn from each other's experiences without fear of embarrassment.

Continued on next page

U.S. Marines with Aircraft Rescue and Firefighting, Marine Corps Air Station Kaneohe Bay, extinguish a fire during Exercise Lethal Breeze 2022, Marine Corps Base Hawaii, June 23, 2022. The exercise was an aircraft mishap response scenario, which included entities from on and off the installation, an opportunity to increase interagency response capabilities. (U.S. Marine Corps photo by Cpl. Israel Ballaro)

Instead of seeing mistakes as failures, Marines can see them as opportunities to enhance safety, improve readiness and refine operational tactics. This transparency builds trust across all ranks, ensuring every Marine feels accountable and empowered to contribute to the unit's success.

When was the last time you or one of your Marines reported a near-miss? Was the reporting welcomed, valued and did it strengthen unit cohesion and trust?

2 Honor the Responsibility to Report
Near-miss reporting is not about assigning blame but about taking responsibility for collective safety and operational excellence. Marines directly contribute to improving the unit's readiness by honoring the responsibility to report. Each report highlights areas for improvement, whether it's refining an SOP, improving equipment or adjusting procedures. By learning from human errors and refining processes, Marines ensure they are always ready for the next mission, with fewer avoidable risks. The reporting process strengthens individual and unit-level proficiency, leading to tremendous success in every training exercise and operation.

When was the last time you or your unit reinforced the importance of near-miss reporting as a tool for continuous improvement, increasing readiness and effectiveness?

3 Eliminate the Fear of Embarrassment
Marines shouldn't fear reporting a near-miss, particularly when it's an opportunity to learn and grow. The Marine Corps thrives on self-improvement and every Marine must understand reporting a near-miss is a sign of strength, not weakness. Removing the stigma of embarrassment and focusing on the positive impact of near-miss reporting promotes an atmosphere where every Marine is motivated to contribute. When Marines see the focus is on safety and readiness rather than punishment, they will be more likely to engage in open communication, enhancing unit cohesion and trust.

When did you or your unit last take steps to ensure Marines felt comfortable reporting near-misses without fear of embarrassment, knowing it strengthens the team?

4 Provide Clear and Supportive Reporting Channels
To build a strong culture of near-miss reporting, units must have clear, accessible and supportive channels for Marines to report incidents. These channels should be efficient, simple to use and designed to gather essential data without hesitation. By providing such channels, the unit creates an environment where Marines can contribute valuable feedback, leading to better practices, improved readiness and higher operational standards.

Clear reporting systems ensure no potential hazard goes unnoticed, making it easier for leadership to adjust procedures to address emerging risks or trends.

When was the last time you or your unit reviewed or reinforced the procedures for near-miss reporting to ensure they were clear and accessible, empowering Marines to contribute to safety and operational excellence?

5 Recognize the Value of Reporting Near-Misses
Recognition plays a vital role in encouraging near-miss reporting. When Marines understand their proactive actions are valued, they are more likely to report near-misses and contribute to a stronger safety culture. Annually, there is a safety award for an officer, senior non-commissioned officer, junior enlisted, civilian of the year and four unit awards based on unit size. Acknowledging and rewarding Marines for reporting near-misses in any way reinforces the idea reporting is a leadership action directly impacting unit readiness, cohesion and proficiency.

When Marines see there is no retribution for reporting hazards, the direct link between their speaking up and a unit improving protocols, they'll be motivated to take ownership of safety practices, fostering a more capable and effective unit culture built on trust.

When did you or your unit last recognize or reward Marines for reporting near-misses and reinforcing their contribution to unit readiness and safety?

6 Incorporate near-miss Reporting into Training
Integrating near-miss reporting into regular training and SOPs allows Marines to continuously improve their proficiency and readiness. Teaching Marines how a HAZREP works, discussing real-life examples of near-misses or sharing Commandant of the Marine Corps Safety Division website or Marine Corps lessons learned and how they were addressed, Marines learn practical lessons that they can apply to their own work. This also creates a feedback loop that improves unit SOPs and enhances the overall training experience.

When near-miss reporting is built into the training culture, it helps Marines internalize how trust works in a unit, builds competency and teamwork and ensures they are

prepared for any mission, climate or place.

When did you or your unit last include near-miss reporting as part of training exercises or safety briefs?

7 Use Data to Improve and Prevent Incidents
Each near-miss report provides valuable data that can be used service-wide for tangible improvements. By analyzing near-miss reports and identifying patterns, leaders can adapt SOPs to better address potential risks, sharpen skills and enhance readiness. Whether improving equipment, refining a procedure or adjusting training protocols, the hazard can be addressed service-wide by reporting those HAZREPs in RMI.

Suppose the reporting is kept internal to the unit or does not occur. In that case, Headquarters Marine Corps can use the data to drive change relevant to fast-adapting units as the Marine Corps evolves to meet new challenges. This proactive approach not only improves safety but also sharpens the proficiency of every Marine in the unit.

Are units using Marine Corps Concept Logistics, unit, installation or region RMI data to understand high-hazard areas, and what could be done to address them?

Encouraging near-miss reporting in the Marine Corps is an opportunity to turn every challenge into a chance for improvement. By fostering a culture where near-miss reporting is seen as an honorable, proactive responsibility, it creates an environment strengthening trust, enhancing unit cohesion and boosting operational readiness. Marines who report near-misses are helping to improve SOPs, refine MOS proficiency and build stronger, more capable teams.

The result is a Marine Corps constantly learning, evolving and preparing for success in every mission—ensuring every Marine is ready, resilient and capable of performing at the highest level.

In conclusion, ask yourself when was the last time you or your unit evaluated the impact of near-miss reporting on overall unit performance and how did it improve readiness and proficiency?

U.S. Marines with 3d Marine Division rappel down a wall during a basic jungle skills course at the Jungle Warfare Training Center on Camp Gonsalves, Okinawa, Japan, March 19, 2025.U.S. Marine Corps photo by Staff Sgt. JVonnta Taylor)

SAFETY SPOTLIGHT

Navy Lt. Gricel P. Rodriguez

Ground Safety Officer

13th Marine Expeditionary Unit, Camp Pendleton, California

Lt. Gricel P. Rodriguez, a U.S. Navy Medical Planner by trade, has served as the Ground Safety Officer for the 13th Marine Expeditionary Unit at Camp Pendleton, California, since February 2024.

She has played a crucial role in conceiving, developing and implementing several critical ground safety initiatives for the unit. Her expertise has been essential in the unit's pursuit of achieving zero injuries in the workplace and throughout 14 overseas exercises.

As a result of her dedication and initiative-driven mindset, Rodriguez has educated over 300 Marines and Sailors on how to identify and prevent workplace hazards. With a keen eye for detail, she meticulously inspected and rectified more than 120 safety concerns. Her thorough evaluations identified hazards and mitigation of risks and ensured compliance with federal and Marine Corps safety protocols.

She diligently tracks corrective actions to ensure hazards are promptly addressed, contributing to a safer environment for everyone.

Hardworking, passionate and relentless, Rodriguez strives daily to make a positive impact within the unit!

MORE THAN THE RIDE

WHY MOTORCYCLE MENTORSHIP SAVES LIVES

By Dale Wisnieski, Traffic Safety Manager, Commandant of the Marine Corps Safety Division

Each year, Marines across the fleet are impacted by motorcycle mishaps.

Some walk away, others don't. While training and protective equipment are critical to rider survival, one of the most overlooked and powerful tools we have is each other.

That's the idea behind the Marine Corps Motorcycle Mentorship Program (MMP); not to penalize but to protect, not lecture but lead.
And make no mistake, this program saves lives.

A Hard Reality: it's Often Not the Rider

Motorcycle fatalities and mishaps remain among the leading causes of non-combat deaths in the Marine Corps. While inexperience and speed are frequent contributors, other drivers are a major factor in motorcycle mishaps. A significant number of our mishaps happen when Marines are riding responsibly, within the rules, wearing their PPE and a civilian driver fails to see them, cuts them off or turns in front of them.

In many of these cases, the Marine did nothing wrong, but the outcome doesn't change.

That's why our riders must be more than good; they must be defensive, situationally aware and prepared to anticipate others' mistakes.
That mindset doesn't develop in a classroom; it develops through mentorship.

Mentorship is Not a Weakness, it's a Weapon

Mentorship can carry a stigma in the Marine Corps. Some see it as extra oversight or correction. That couldn't be further from the truth when it comes to motorcycle riding.

The MMP isn't about telling people what to do. It's about helping fellow Marines sharpen their instincts, avoid preventable mistakes and develop the kind of judgment that keeps them alive.

Experienced riders have learned these lessons, sometimes the hard way. Insight could be the reason another Marine makes it home tonight. That's a responsibility everyone should be proud to carry.

When riders get together, they can share lessons they have learned about riding in the area. Certain intersections may be more hazardous, while some routes are best avoided at certain times of the day.

These lessons are often shared in a conversation between two riders. Learning those lessons from each other is better than the hard way.

A Culture Shift Begins with You

Mentorship works because Marines listen to Marines. Whether picking out a first bike, deciding whether to wear a full-face helmet or thinking about pushing the limit on a weekend ride, peer influence matters.

That influence can be deadly or lifesaving, depending on the example set.

Mentorship also doesn't stop when the engine shuts off. It happens in the barracks, on the flight line and in the shop. A five-minute conversation can change a young Marine's decisions before their next ride. It can also start a lifelong habit of safe riding and solid risk management.

U.S. Navy Petty Officer 2nd Class Austin Wolfe, left, an Athens, a hospital corpsman with Headquarters Battalion, 2d Marine Division (MARDIV) receives instruction from U.S. Marine Corps Staff Sgt. Kenneth Dimille, right, a motorcycle mentorship program coordinator with Headquarters Battalion, 2d MARDIV, during the 2d MARDIV poker run on Camp Lejeune, North Carolina, May 2, 2024. (U.S. Marine Corps photo illustration by Cpl. Alexis Sanchez)

Tools to Help Lead

The Safety Division has developed 36 mentorship modules, available on safety.marines.mil, to support new and experienced riders in discussing real-world hazards, best practices and safe riding habits.

These modules cover everything from basic maintenance to group ride planning and advanced hazard perception.

These are tools, not checklists. Use them to create honest conversations and foster a unit-level culture of motorcycle success.

The Mission: Get Them Home

Marines are trained to take calculated risks to accomplish the mission. But riding a motorcycle isn't a combat operation; it's a personal decision carrying real consequences. As mentors, leaders and Marines, the goal is always the same: ensure every Marine gets home alive.

Doing nothing is not an option. We mentor Marines through every professional mission, motorcycle safety should be no different. We owe it to ourselves, our brothers and sisters in arms, and the Corps to take care of each other.

U.S. Marines, Sailors and civilians with Headquarters and Support Battalion, Marine Corps Installations East-Marine Corps Base (MCB) Camp Lejeune, prepare for a Motorcycle Mentorship Program (MMP) educational ride with at MCB Camp Lejeune, North Carolina, Nov. 7, 2024. (U.S. Marine Corps photo by Sgt. Khalil Brown)

So, if you're an experienced rider, step up. Be the reason another Marine walks through their front door at the end of the day.

Semper Fi.

For additonal resources use the QR Code or go to safety.marines.mil:

John Carlo Stallone

Safety and Occupational Health Specialist

Marine Corps Forces Reserve

Safety and Occupational Health New Orleans, Louisiana

SAFETY SPOTLIGHT

Since December 2024, John Carlo Stallone has served as a safety and occupational health specialist and program manager for Marine Corps Forces Reserve (MARFORRES) Safety and Occupational Health.

Stallone's expertise is instrumental in MARFORRES staying compliant with Occupational Safety and Health Administration (OSHA) and Marine Corps Orders, standards and objectives.

He strives to prevent employee workplace injuries across MARFORRES with outreach, training and instruction revisions.

Stallone's zeal and dedication to the mission have helped with OSHA Outreach inspections, teaching during the Ground Safety for Marines course held at Headquarters MARFORRES and training and aiding Marines and civilians with essential knowledge to identify and prevent workplace hazards.

As a former OSHA compliance officer, Stallone has vast experience with facility-based safety inspections. His thorough evaluations identify risks/hazards while focusing on compliance with 29 CFR 1910 and Marine Corps Order 5100.29C.

Stallone has made a career out of doing more with less and still staying compliant with OSHA/Department of Defense standards while being quick to assist all Marines, Sailors and civilians within MARFORRES.

MITIGATING HEAT STRESS

ENSURING READINESS AND SAFETY

By Peter Evans, Deputy Director Installation Safety Office, Marine Corps Base Hawaii

Heat stress remains a significant concern for Marines, Sailors and civilians as the summer months approach. The Wet-Bulb Globe Temperature (WBGT) Index assesses heat stress conditions, ensuring that personnel can safely conduct outdoor activities without risking heat-related illnesses.

Marine Corps Base Hawaii (MCBH) experiences high temperatures and humidity which can hinder the body's cooling process. This environment poses a dangerous health hazard, particularly during the summer months and can result in heat casualties if not appropriately managed. You don't have to live in Hawaii to experience heat stress.

A Centers for Disease Control and Prevention (CDC) report noted a significant increase in heat-related emergency room visits across the U.S. in 2023, totaling 119,605 visits. Most of these visits occurred between May and September (CDC.gov, 2023).

This article will dig into the importance of heat stress prevention and the standards to mitigate these risks, focusing on the specific challenges faced.

Understanding Heat Stress

So, what exactly is heat stress? Simply put, it happens when the body can't cool properly due to high temperatures, humidity and radiant heat. To help leaders make smart decisions about outdoor activities, the military uses the WBGT Index. This index combines all those environmental factors to clearly show how risky it is outside.

(Above) U.S. Marine Corps recruits with Kilo Company, 3rd Recruit Training Battalion, participate in a circuit course training event at Marine Corps Recruit Depot San Diego, California, March 10, 2025. (U.S. Marine Corps photo by Cpl. Sarah M. Grawcock)

(Behind) U.S. Marines Corps recruits with Fox Company, 2nd Recruit Training Battalion, sprint during a physical training event at Marine Corps Recruit Depot San Diego, Oct. 25, 2022. Physical training is conducted regularly throughout recruit training to ensure physical readiness within the companies. (U.S. Marine Corps photo by Cpl. Grace J. Kindred)

The WBGT Index is divided into four levels usually seen through a flag system:

-**Green Flag (WBGT: 80 – 84.9 F)**: This is the lowest level of heat stress, but it's still important to be careful, especially if new to the heat or performing heavy activities.
-**Yellow Flag (WBGT: 85 – 87.9 F)**: At this level, new personnel should limit strenuous exercise. The risk of heat-related illnesses starts to rise, so safety protocols need to be in place.
-**Red Flag (WBGT: 88 – 89.9 F)**: This is a high-risk zone and most people should avoid strenuous activities unless necessary.
-**Black Flag (WBGT: 90 F and above)**: This is the highest level of heat stress. All strenuous outdoor activities should stop unless they're critical. It's enough even non-essential activities should be halted to prevent heat-related illnesses.

Understanding these flags can help Marines, Sailors and civilians stay safe and healthy during the hot summer months.

Standards

The military takes heat stress seriously and has set up strict standards to manage it effectively. The Marine Corps has a program called the Marine Corps Heat Injury Prevention Program (MARADMIN 111/15) focusing on key strategies like staying hydrated, keeping an eye on the WBGT Index and getting people used to the heat gradually (acclimatization). It's also essential that everyone, including civilians, get annual training on recognizing heat exhaustion and heat stroke symptoms and understanding how to handle emergencies.

The Navy has standards on heat illness prevention such as those outlined in OPNAVINST 5100.19F. They're all about controlling heat exposure on ships which can get intense due to cramped spaces and limited airflow. The Navy requires regular heat stress checks and uses WBGT meters to monitor conditions. Commanding officers are responsible for ensuring everyone follows these rules, knows the risks and works in a safe environment with good ventilation, cooling systems and regular breaks when it gets hot. It's all about keeping everyone safe and healthy, especially in those harsh conditions.

Acclimatization: A Key to Heat Stress Prevention

Acclimatization is essential when it comes to preventing

heat stress. It's about gradually getting used to hot conditions over time so your body can build up its tolerance. This process usually takes around 7 to 14 days and needs to be customized based on personnel fitness levels and environmental conditions.

Here's how it works:
Personnel start with light activities in the heat for short periods and then gradually increase how long and intense those activities are over several days. It's important to keep an eye on the WBGT Index so adjustments can be made accordingly. Don't forget to stay hydrated throughout the process.

Acclimatization is especially important for new personnel moving to a base with a climate different from what they're used to. It helps the body get used to the local environment which can reduce the risk of heat-related illnesses. It's like giving the body a chance to adjust to the new heat so you can stay safe and healthy.

Understanding Heat Condition Flag Warning

Green Flag 80 to 84.9 degrees F	Heavy exercises, for non acclimated personnel, will be conducted with caution and under constant supervision.
Yellow Flag 85 to 87.9 degrees F	Strenuous exercises or physical labor will be curtailed for non acclimated, newly assigned Marines and Civillian Marines in their first 3 weeks. Avoid outdoor classes or work in the sun.
Red Flag 88 to 89.9 degrees F	All PT or very strenuous work will be curtailed for those not thoroughly acclimated by at least 3 weeks. Personnel not thoroughly acclimated may carry on limited activity not to exceed 6 hours per day.
Black Flag 90 degrees F and above	All nonessential physical activity will be halted.

Prevention
Preventing heat stress isn't just about staying cool; it's about being proactive and prepared. A big part of this is staying hydrated. Encourage everyone to drink water regularly, even if they don't feel thirsty. Hydration is crucial for the body to regulate its temperature effectively, so making it a habit is essential. Another key step is monitoring heat conditions. Using WBGT meters helps track heat stress levels which leaders need to make informed decisions about activities. They must stay updated on current and forecasted heat conditions to adjust plans accordingly so everyone can stay safe and avoid unnecessary risks.

Education is also vital in preventing heat stress. Leaders should provide regular training on heat stress symptoms and prevention strategies for all personnel, including civilians. This training should focus on recognizing early signs of heat exhaustion such as dizziness and nausea. Knowing how to respond effectively in emergencies is also crucial. Implementing these measures can significantly reduce the risk of heat-related illnesses and ensure safety across all environments. It's all about being aware, prepared and proactive.

Recognizing the Symptoms
Recognizing the symptoms of heat-related illnesses is necessary for early intervention and preventing severe outcomes. Heat exhaustion is characterized by several key signs including heavy sweating, pale skin, a fast but weak pulse, nausea or vomiting and dizziness or fainting. If left untreated, heat exhaustion can progress to heat stroke which is a serious medical emergency.

Heat stroke is marked by a body temperature of 103 F or higher, confusion or an altered mental state, slurred speech, seizures and loss of consciousness. Acting quickly and seeking immediate medical attention is essential if you observe any of these symptoms.

Prompt action can make a significant difference in preventing serious complications.

Response to Heat-Related Illnesses
In the event of a heat-related illness, prompt action is essential.

For heat exhaustion, move the person to a cooler location, remove excess clothing and cool them down with cool cloths or a cool bath.
Encourage them to drink cool water if they are conscious and can drink.

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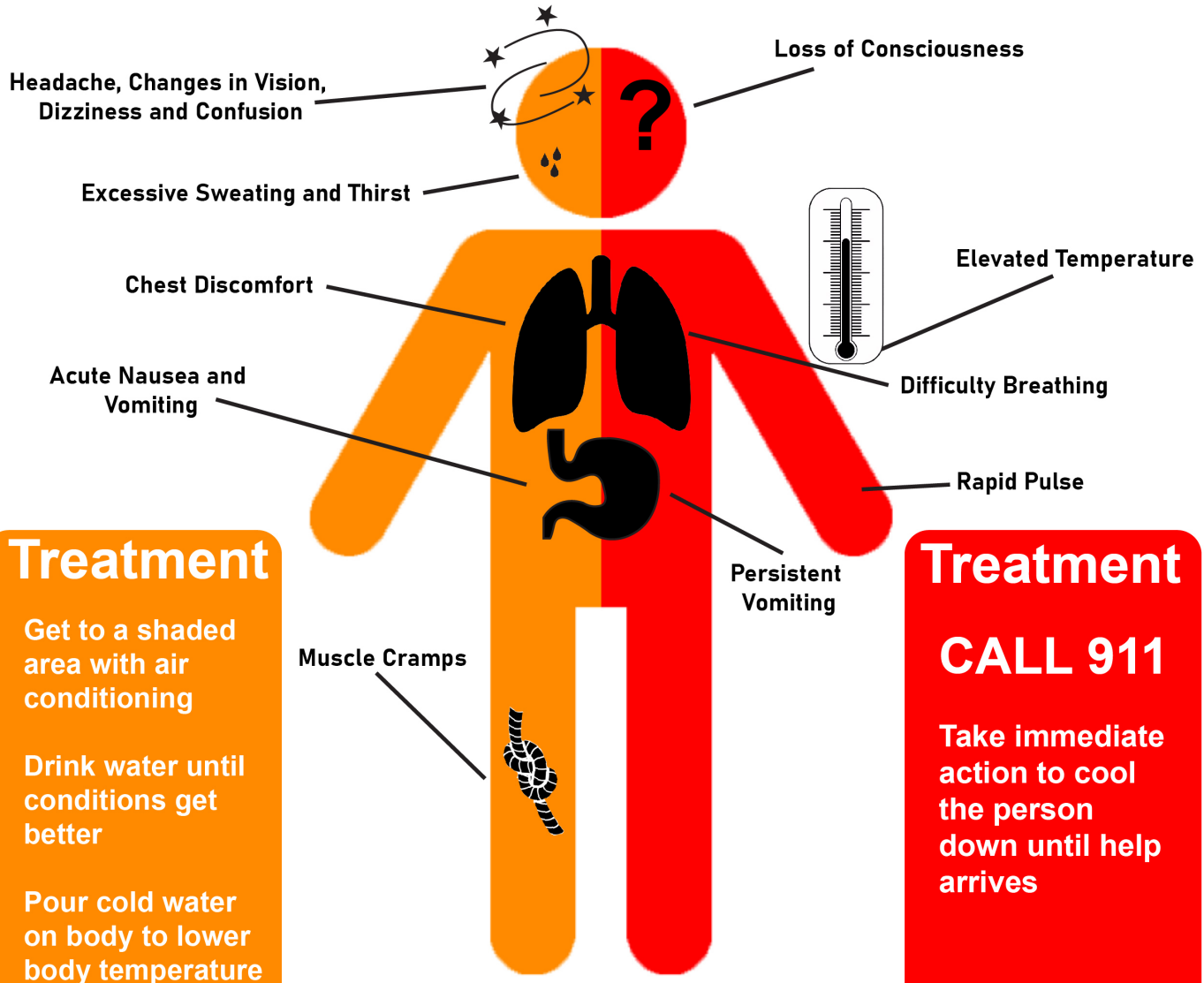
Heat Exhaustion

Heat Stroke



Treatment

Get to a shaded area with air conditioning

Drink water until conditions get better

Pour cold water on body to lower body temperature

Treatment

CALL 911

Take immediate action to cool the person down until help arrives

Without treatment

May Lead to Heat Stroke

May Lead to Death

For heat stroke, call for emergency medical assistance immediately. While waiting for help, move the person to a cooler location and cool them down as quickly as possible.

A Heat Stress Casualty Scenario
Scenario: It's a hot summer day at MCBH with a WBGT Index of 89 F indicating a red flag condition. Lance Cpl. Ebert, a recruit, is participating in a rigorous training exercise. Despite the warnings, Ebert pushes through the pain believing he is tired. However, as the day progresses, his condition worsens and he begins to show signs of heat exhaustion including dizziness and nausea.

What Should Happen Next?
In response to Ebert's heat-related illness, immediate action is taken to ensure his safety. He is quickly moved to a cooler location, such as a shaded area or an air-conditioned room, to reduce his exposure to heat.

Next, his gear and excess clothing are removed to help cool him down as these can trap heat and exacerbate his condition. Cool cloths or cool water are applied to his body to further lower his body temperature.

If Ebert is conscious and able to drink, he is encouraged to consume cool water to rehydrate. Finally, medical personnel are called to assess his condition and provide further treatment if necessary. This prompt and comprehensive response is critical in preventing the progression of heat exhaustion to more severe heat-related illnesses. If Ebert's condition worsens or shows signs of heat stroke, such as a body temperature above 103 F, confusion or loss of consciousness, emergency medical assistance is called immediately.


U.S. Marine Corps recruits with 2nd Recruit Training Battalion, carry out dynamic warm-ups before a pugil sticks training event at Marine Corps Recruit Depot San Diego, California, Feb. 25, 2025.

Heat stress seriously threatens the safety and readiness of Marines, Sailors and civilians. By understanding the WBGT Index, adhering to updated military orders and instructions and implementing effective prevention strategies, we can reduce the risk of heat-related illnesses and ensure all individuals remain safe and effective in all environments.

As we move into the warmer months, vigilance and proactive measures are crucial to preserving combat readiness and saving lives.

Like those in Hawaii, your unique environmental conditions may require heightened awareness and adherence to heat stress prevention protocols for everyone on base.

By working together we can mitigate the risks associated with heat stress and ensure our forces and civilian support personnel remain strong and resilient.

For additonal resources on the WBGT use the QR Code below:

SAFETY SPOTLIGHT

John D. Williams
Explosive Safety Specialist
Marine Corps Base Camp Butler
Okinawa, Japan

Since January 2025, John Williams has served as an explosives safety specialist, ensuring compliance with Marine Corps explosives safety regulations. With 12 years of experience as an Aviation Ordnance Technician and 15 years as a Ground Ammunition Technician in the Marine Corps, he brings a wealth of expertise in munitions handling, storage and safety management.

Shortly after arriving, he participated in the Explosive Safety Inspection conducted by Program Manager for Ammo Office from Headquarters Marine Corps, reinforcing compliance across multiple units. He has since coordinated with over 10 commands and units to develop an Explosive Safety Self-Assessment Schedule, improving effectiveness and efficiency in risk mitigation efforts. Additionally, he has processed and submitted storage authorization requests, ensuring proper ammunition and explosives management. To further enhance his expertise, he successfully completed the Tactical Explosive Safety Officer Course and several Defense Ammunition courses, including Ammo-68 'Military Munitions Rule.' These certifications have strengthened his ability to oversee and enforce explosives safety programs, streamlining procedures and ensuring compliance.

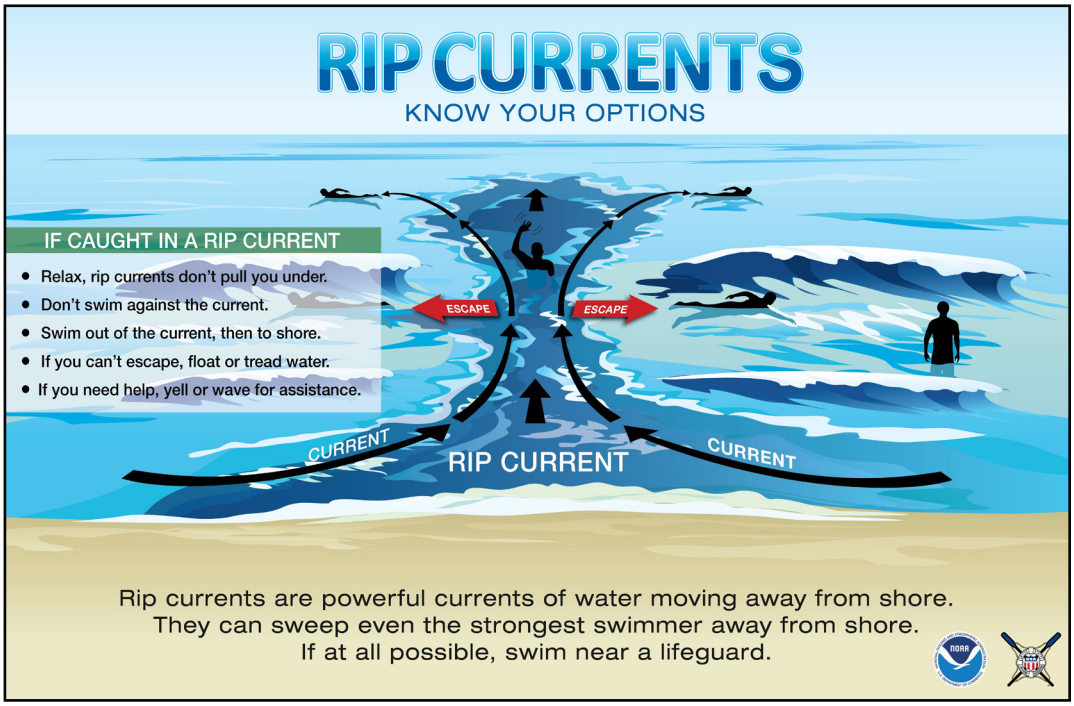
Through his dedication and proactive leadership, Williams continues to promote a strong safety culture, reducing risks and ensuring mission readiness within the United States Indo-Pacific Command area of responsibility.

ESCAPING THE RIP

By Shawn Curtis, Safety and Occupational Health Manager, Commandant of the Marine Corps Safety Division

Rip currents or "rips" are powerful, channeled water currents flowing away from shore. They typically extend from the shoreline through the surf zone and past the line of breaking waves.

Rips can occur at any beach with wave breaks, including the Great Lakes. These currents are efficient, indiscriminate killers and are a threat to anyone who gets caught in one. The United States Lifesaving Association (USLA) estimates over 100 drowning fatalities are attributed to rip currents annually in the U.S., and 80% of all surf beach rescues performed are rip current-related. Closer to home, 13 Marines have perished in rip current-related mishaps since 2007.



Rips usually form as waves disperse along the beach, causing water to become trapped between the shoreline and underwater bedding such as reefs, sand and rocky bottoms. The trapped water acts on gravity and begins to return offshore.

As water flows away from the coastline, it seeks the path of least resistance, such as deeper water. This is where the current gains momentum. A strong rip can move at 5 mph, making it nearly impossible to swim against.

Ironically, some of the worst rips typically originate from a large storm swell several hundred miles off the coast. The hazards they present are often magnified as they appear to be the calmest water areas along the beach. This is because the underwater channels are deeper than the areas on either side where waves often break.

The lack of surf usually attracts unsuspecting swimmers who see relatively flat water over the rip channel and believe they are choosing the safest area for swimming.

It's best to assess the area before entry. Look for warning signs informing beachgoers of the presence of rip currents and flags displaying solid yellow (medium hazard), red (high hazard) or red flag over red flag (closed for public use).

These color-coded flags are universal and used by the United States, Australia, Japan and most European countries. Furthermore, if you observe a channel of churning, choppy water, a notable difference in the water's color, a line of foam, murky water or debris steadily moving away from shore, the existence of rips is likely. It may also indicate danger if no other swimmers are in the water.

The best safety precautions are to choose a land-based activity or, if

the option exists, swim at beaches staffed with lifeguards. Ensure novice swimmers wear an appropriately sized U.S. Coast Guard-approved or equivalent life vest with a performance level of 70.

For additonal resources on life jackets use the QR Code.

How you respond could make the difference between life and death if caught in a rip current. Far too often, moderate to inexperienced swimmers attempt to swim against the current to return to shore and notice they're making little to no forward progress. At this point, panic soon sets in, and the swimmer's stroke becomes less effective as their energy is quickly consumed.

The most effective way to escape the grip of rips is to swim parallel to the coastline, allowing the swimmer to move across the rip instead of against it. Once out of the rip current's channel, the swimmer can turn and swim to shore.

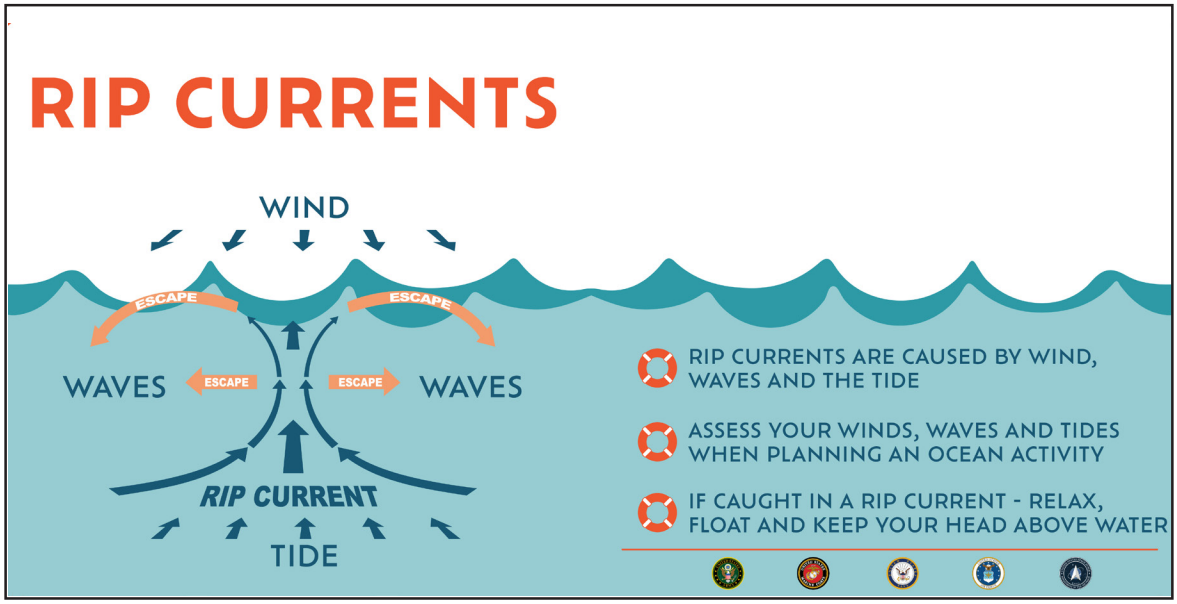
Another way to escape is to relax and allow the rip current to carry the swimmer to its outermost limit, usually just beyond the breaking surf. Upon judging the width of the rip current, the swimmer can then swim parallel to the coast and safely to shore. Remember, the key is to remain calm and conserve energy to stay afloat.

Many Marines and their loved ones will take advantage of living close to coastal waters this summer to cool off and engage in water recreation. To reduce the risks of falling prey to rip currents, learn to swim, stay informed of weather and water conditions, adhere to warnings, swim in areas staffed with lifeguards and stay out of the water when conditions are hazardous.

For more information on rip currents, visit the National Oceanic and Atmospheric Administration or USLA websites at:

NOAA

USLA



SAFETY SPOTLIGHT

Jacob R. Lewis

Explosives Safety Officer

Marine Corps Base Camp Butler Okinawa, Japan

Since September 2024, Jacob Lewis has served as the Explosives Safety Officer for Marine Corps Base Butler (MCBB) Okinawa, Japan. He supports island-wide operations by setting explosives safety goals to reduce risk exposures to the smallest number of personnel and infrastructure for the least amount of time.

Due to his earnest dedication, Lewis instructs Explosives Driver Courses monthly. He has currently certified over 40 personnel to date by offering a new frame of reference to young operators and conferring essential knowledge to identify and comply with current U.S. and Japanese road standards before transporting ammunition and explosives over public roadways.

With a proactive approach, he has inspected over 35 units' programs, with another 58 units and locations scheduled across Okinawa. His evaluations identify risks by ensuring compliance with explosives safety and physical security protocols. His perceptiveness ensures hazards are correctly identified, addressed and documented to ensure continuity of safe operations.

Lewis' attitude extends beyond just doing his job; his 27 years of Marine Aviation Ordnance service has instilled a genuine concern for service members and wholeheartedly wants them to succeed. That success can be achieved by following safe procedures and building on lessons learned.

Marine Corps Safety Climate Surveys

By Shawn Curtis, Safety and Occupational Health Manager, Commandant of the Marine Corps Safety Division

This summer is shaping up to be one hectic permanent change of station season and the ensuing turnover of commanding officers (CO) is no exception.

With change of commands in full swing, it's a prime opportunity for safety officers and managers to help shape their unit's safety climate for the next two to three years.

One of the key aspects of command turnover is preparing the new boss to administer the Ground Climate Assessment Survey System (GCASS) for ground units and the Marine Corps Aviation Survey System (MCASS) for flying commands.

These surveys help define the current state of an organization's safety posture by providing real-time anonymous feedback on the attitudes and perceptions of the safety management system from personnel within the command.

GCASS and MCASS are Inspector General assessment items under Functional Area Checklist 5100 and are required within the first 90 days of the CO assuming command and annually thereafter.

U.S. Marine Corps Senior Drill Instructor Staff Sgt. Savannah Pizano with India Company, 3rd Recruit Training Battalion, participates in a battalion commander's inspection at Marine Corps Recruit Depot San Diego, California, Feb. 26, 2025.(U.S. Marine Corps photo by Cpl. Sarah Grawcock)

Following a survey, the CO receives a telephone outbrief from an Advanced Survey Design analyst who assesses the unit's command climate, safety culture, resource availability, workload and the effects of safety intervention programs to highlight areas where the CO might best focus resources and efforts.

For more information and to set-up a survey, visit:

GCASS

MCASS

SAFETY SPOTLIGHT

Amy C. Varney

Occupational Safety and Health Specialist

Marine Corps Base Camp Butler Okinawa, Japan

Amy Varney joined the Marine Corps Base Camp Butler (MCBB) Occupational Safety and Health (OSH) Team as an OSH Specialist in July 2022. Despite being relatively new to the role, she brings an impressive 26 years of experience in industrial hygiene, occupational safety and environmental compliance. Her expertise and problem-solving approach have quickly established her as the go-to OSH specialist for addressing complex safety challenges. Known for her mentorship, Varney actively supports professional growth, encouraging others to step outside their comfort zones to navigate future challenges and achieve long-term success. As the Confined Space Program Manager at MCBB, Varney oversees a program with more than 13,000 confined spaces. Her diligence has contributed to zero confined space incidents, even with daily permit-required camp entries. She also ensures Japanese contractors comply with OSH Administration and Marine Corps regulations when performing confined space work on the base. Her technical expertise and detailed analysis of contractor confined space entry plans have been instrumental in maintaining compliance and protecting worker safety.

Additionally, she is a primary instructor for the Ground Safety for Marines secondary Military Occupational Specialty course, where she has trained over 225 Marines, Sailors and civilians on critical topics such as risk management, ergonomics and Safety Management Systems. Varney's dedication, expertise and contributions make her an invaluable Marine Corps Safety Team asset.

WHAT IS ARM IMMERSION COOLING?

An **Arm Immersion Cooling System (AICS)** can be any reservoir of cold water used to immerse the hands and forearms during rest periods or at the conclusion of strenuous physical work in warm environments.

AICS serves as a preventive measure and can reduce core temperature by ~**0.10°F per minute, so about 5 minutes of immersion yields 0.5°F reduction of core temperature.**

Water Temperature (Degrees)	Cooling Time* (Minutes)
> 80°F	Replace Water
71–80°F	12–15
55–70°F	8–12
45–54°F	5–8
35–44°F	3–5

*Times are calculated to achieve **~0.5°F reduction** in body temperature. Failure to maintain proper water temperature or immerse the arms for enough time will diminish the effectiveness of the device.

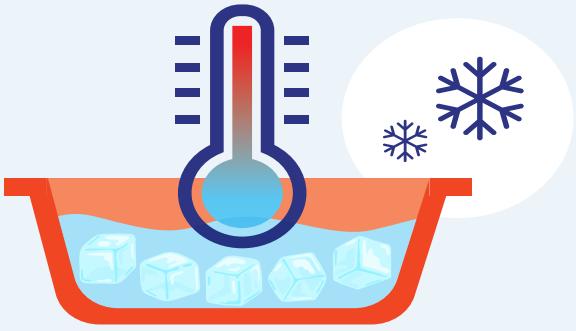
AICS COMPONENTS

While cooling systems are available commercially, they might not be available in every training scenario. Try other solutions instead.

- **Large cooler**
- **Large water trough**
- **Locally fabricated solutions**

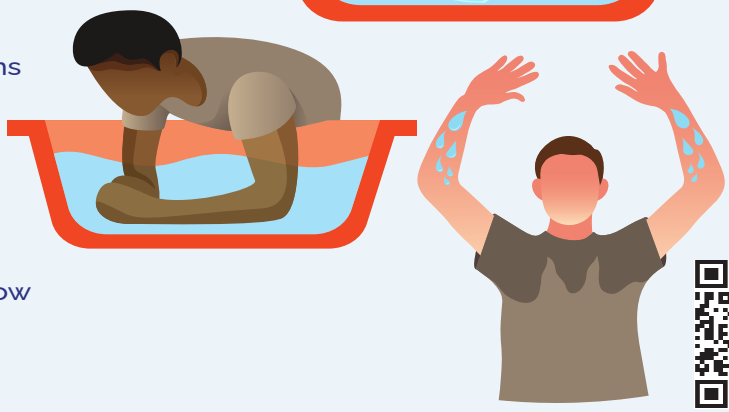
AICS SETUP

1. Choose any insulated container that can hold at least **20 gallons of ice water** with enough space for immersion of forearms or arms.
2. Fill the container with 20 gallons of ice water.
3. Insert thermometer into ice water to monitor its temperature.



HOW TO USE AICS

1. Submerge hands and forearms (up to biceps) in ice water.
2. Keep hands and forearms submerged for the approximate amount of time and temperature range to accelerate body cooling.
3. Raise arms above head to allow water to drip down to core.



HEAT PROOF YOUR PERFORMANCE

Courtesy of the Commandant of the Marine Corps Safety Division

Even physically fit participants can succumb to climate conditions they haven't prepared for.

U.S. Marine Corps 1st Sgt. Christopher M. Thomas, Company 1st Sergeant for Kilo Company, 3rd Recruit Training Battalion, center right and Staff Sgt. Mario Nunez, center left, a Chief Drill Instructor, lead dynamic warm-ups for Recruits prior to a circuit course training event at Marine Corps Recruit Depot San Diego, California, March 10, 2025. (U.S. Marine Corps photo by Cpl. Sarah M. Grawcock)

Whether it's preparing for a physical fitness test or the upcoming 50th Marine Corps Marathon in October, multiple factors contribute to the development of heat illness. The participant's preparation and training are first and foremost. However, failing to acclimate to the climate on race day can significantly affect performance and lead to illness or injury.

Even physically fit participants can succumb to climate conditions they haven't prepared for. To decrease the risk of heat illness even further, preparation before the event (up to 48 hours prior) is essential.

Electrolytes and hydration do not just come from liquids but a well-rounded diet provides key nutrients, vitamins and minerals (carbohydrates, protein, sodium, magnesium, potassium, calcium and chloride) to enable the body to retain fluids and metabolize the energy needed for the required activity.

Athletes should educate themselves on preventing heat illness by acclimating to specific climates, testing fuel sources by experimenting during training and doing nutrition preparation leading up to the event.

Participants should be familiar with their nutritional needs and especially be in tune with the amount of sweat loss they typically experience and how they should refuel to counteract it. While training, they should experiment with various fuel sources leading up to race day to learn what their body needs to sustain their energy. Every participant will have different needs and preferences.

Still, all participants should be aware of fuel options available on the course months ahead of time and bring their own if their preferred foods are not available. Ultimately, the event cannot cater to each participant's preference and physical fuel needs so they must consider what nutritional products they will need to prepare them for the distance.

Necessary fuel components to sustain endurance activities need to include the following:

U.S. Marine Corps recruits with Kilo Company, 3rd Recruit Training Battalion, conduct dynamic warm-ups prior to a circuit course training event at Marine Corps Recruit Depot San Diego, California, March 10, 2025. (U.S. Marine Corps photo by Cpl. Sarah M. Grawcock)

1 Sodium - increases thirst and retains fluid in the body to use versus losing it through urine; excess loss of sodium without replacement causes decreases in other essential electrolytes and leads to dehydration.

2 Potassium - regulates fluid and mineral (electrolyte) balance; assists muscle function.

3 Carbohydrates - provides energy to working muscles to sustain exercise; once carbohydrate stores are depleted, exertional rhabdomyolysis risk increases, so it is essential to maintain a steady intake based on one's physical needs.

4 Protein - decreases the risk of muscle damage during activity, decreasing the risk of heat illness and exertional rhabdomyolysis.

Additional beneficial components found to be lost in smaller amounts include electrolytes, calcium (facilitates adenosine triphosphate (ATP) production), and magnesium (assists ATP production and fatty acid oxidation, which is a key energy system for endurance activities).

These fuel components can be found either in a combination of liquids or liquid additions (e.g., tablets/powders) and food sources (e.g., gummies, bars, gels, etc.), as popular liquid additions do not typically contain carbohydrate or protein sources. Popular products contain the necessary fuel components listed above and carbohydrates, but generally not protein. These sports beverages supply carbohydrates in the form of sugar (used in the glycolysis energy system) but are not heavy in nutritional value. Each product has its merits if participants ingest the necessary fuel components at recommended intervals within their preference. Using a good fuel intake strategy helps decrease the risk of heat illness.

Heat illness is common at any endurance and/or elite physical event. Preparation and preparedness are essential to prevent and mitigate any health issue from arising and keep it from escalating to an emergency. Risk can never be eliminated but it can be managed with the proper education, preparation and response. Any participant feeling ill or noticing heat illness symptoms during training or an event should seek immediate support or medical attention.

For additonal resources use the QR Code below:

Slow is Smooth, Smooth is Fast

By Master Chief Special Warfare Boat Operator Brad Rumbaugh, Expeditionary and Special Warfare Small Boat Safety Specialist, Naval Safety Command

From military operations to emergency response units, the principle of "slow is smooth, smooth is fast" has proven valuable. This principle emphasizes the importance of deliberate and cautious actions ultimately leading to efficient and successful outcomes. This principle becomes even more powerful when applied with safety measures, enabling individuals and organizations to navigate complex situations with heightened awareness and reduced risk.

This article will explore the significance of applying "slow is smooth, smooth is fast" with safety in various contexts, highlighting its contributions to an effective decision-making process.

Individuals are better positioned to assess their surroundings and comprehensively understand the situation at hand by taking a deliberate and measured approach. This heightened situational awareness allows for anticipating potential risks and hazards better, enabling individuals to make informed decisions.

Whether in high-stress environments or routine tasks the application of "slow is smooth, smooth is fast" ensures safety considerations are prioritized, enhancing overall situational awareness. Speed and haste often lead to errors and accidents. By adopting a slow and deliberate approach, individuals can minimize the likelihood of making mistakes that have serious consequences. This principle encourages individuals to focus on the task, reducing distractions and increasing attention to detail. Taking the time to assess risks and prioritize safety measures significantly reduces accidents, creating a safer environment for all involved.

Contrary to the notion speed alone leads to efficiency, "slow is smooth, smooth is fast" emphasizes the importance of taking one's time to make informed decisions. Rushing into decisions without careful consideration can lead to suboptimal outcomes and costly mistakes. Individuals can effectively evaluate available options, weigh potential risks and select the most appropriate action by applying this principle. The deliberate and measured approach ensures decisions are well-thought-out, ultimately leading to more efficient and effective results.

The integration of safety measures into the application of "slow is smooth, smooth is fast" fosters a culture of safety within organizations and communities. When individuals prioritize safety alongside efficiency, it becomes a shared responsibility permeating all aspects of their work.

A U.S. Marine with the 1st Light Armored Reconnaissance Battalion, attached to Marine Rotational Force-Southeast Asia, posts security in Sattahip, Thailand, Feb. 26, 2025, during Exercise Cobra Gold 2025. (U.S. Marine Corps photo by Sgt. Christian Tofteroo)

This culture of safety not only reduces the likelihood of accidents but also promotes open communication, collaboration and continuous improvement. Organizations can create an environment where individuals feel empowered to uphold safety standards and contribute to the overall success of their endeavors by embracing this principle and prioritizing safety.

The “slow is smooth, smooth is fast” principle holds significant value when applied alongside safety measures. Individuals enhance their situational awareness, minimize errors and accidents, promote efficient decision-making and cultivate a culture of safety by embracing a deliberate and cautious approach. This principle serves as a reminder that prioritizing safety is not a hindrance to efficiency but rather an integral component for achieving optimal outcomes. By adopting this mindset, individuals and organizations can confidently navigate complex situations, knowing they have taken the necessary precautions to ensure their safety and the success of their endeavors.

U.S. Marines and Sailors with 3d Marine Division conduct platoon attacks at Pohakuloa Training Area, Hawaii, Feb. 7, 2025. (U.S. Marine Corps photo by Cpl. Malia Sparks)

SAFETY SPOTLIGHT

Larry R Simon Jr.

Supervisory Safety & Occupational Health Specialist (Director)

Marine Corps Forces Reserve New Orleans, Louisiana

Larry Simon has served with Marine Corps Forces Reserve (MARFORRES) Safety since June 2021. Simon brings over 23 years of safety and occupational health experience to the Reserve component, starting as a bioenvironmental engineer in the U.S. Air Force.

Simon’s experience and aggressive approach have resulted in the full implementation of all Marine Corps Forces-conducted annual safety inspections being recorded and tracked in the Air Force Safety Automated System – Risk Management Information (AFSAS-RMI) in just two years’ time. This is quite the feat, as MARFORRES Safety tracks roughly 210 geographically separated units across 48 states and Puerto Rico.

Additionally, Simon has been instrumental in modernizing the Ground Safety for Marines (GSM) course. Under his leadership, the in-residence portion has been reduced from three weeks to one week. MARFORRES is currently the only GSM schoolhouse instructing via blended learning (one-week distance learning combined with one week in-residence).

Simon has made a name for himself as a forward-thinking safety professional always looking for ways to improve Safety Management System processes for the end-user to ensure effective and sustainable implementation.

Ground Truth

TACTICAL VEHICLE MISHAP UPDATES

Courtesy of the Commandant of the Marine Corps Safety Division

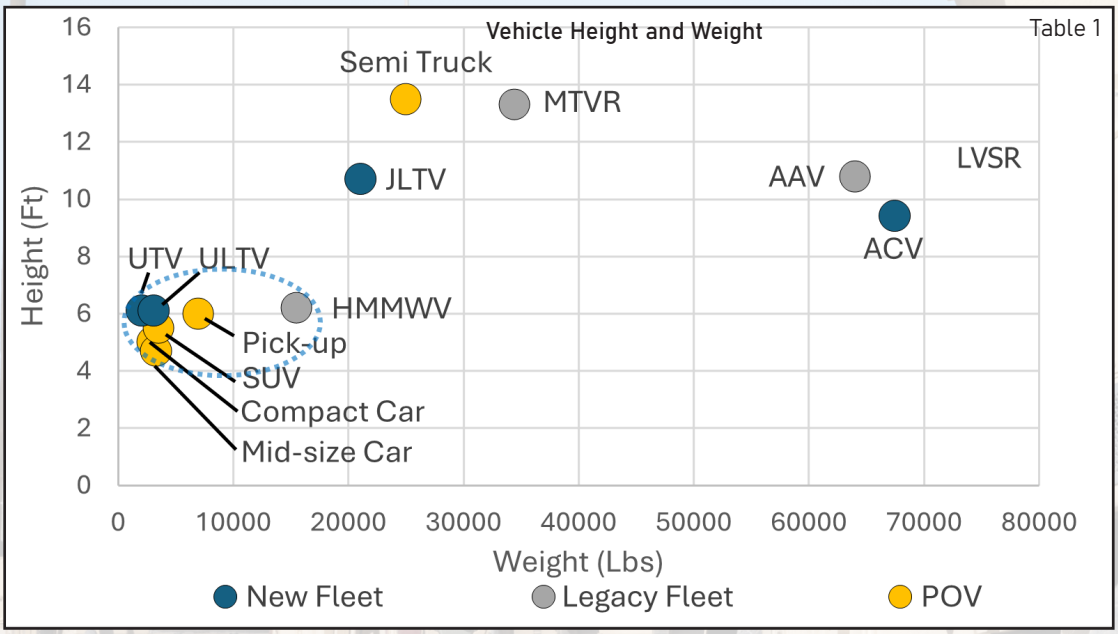
As the Marine Corps continues to update its fleet of vehicles, leaders must be aware of other challenges in the changing world. The goal most teenagers have of looking forward to turning 16 and getting a driver's license is less common today than in the past.In fact, a 2020 survey conducted by the AAA Foundation revealed the average amount of driving for teens aged 16-19 dropped by 17% between 2009 and 2018.

This shift is partly due to increased screen time and less outdoor activity (AAA Foundation for Traffic Safety, 2020). There are several reasons and speculations on why earning a driver's license has declined, from the increased cost of vehicles, price of insurance, to more transportation alternatives and digital access to friend groups.

State-imposed restrictions on full licensure for teen drivers are less obvious but equally significant. Only four states still issue a full unrestricted license at age 16. One-third of states don't issue a full unrestricted license until age 18.

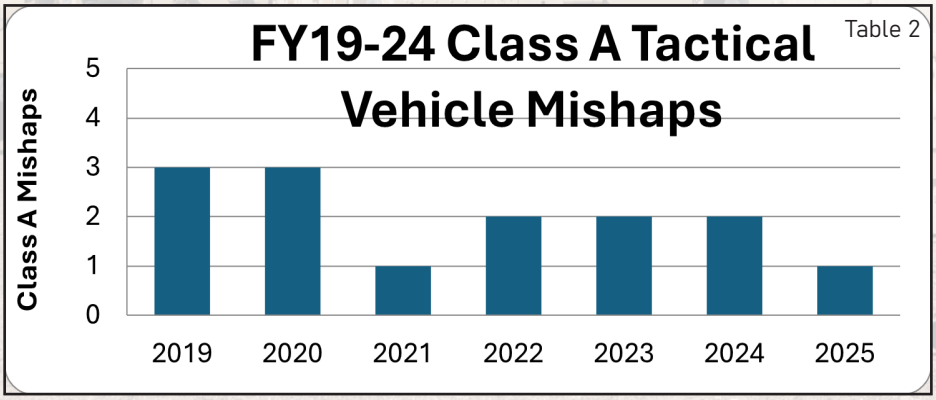
Many states have introduced Graduated Driver Licensing (GDL) programs placing restrictions on teens' driving privileges until they gain more experience. The GDL laws were designed to improve safety by reducing the risk of crashes among inexperienced drivers; they have also delayed the transition to full licensure.

These laws typically limit driving hours, restrict the number of passengers and impose a nighttime driving curfew. According to the Insurance Institute for Highway Safety, these restrictions are shown to reduce teen crash rates by as much as 20%. However, they also mean teens drive less during crucial developmental years, resulting in fewer opportunities to gain experience.



Young Marines who are joining do not have the same driving experiences as their leaders when they were teens.

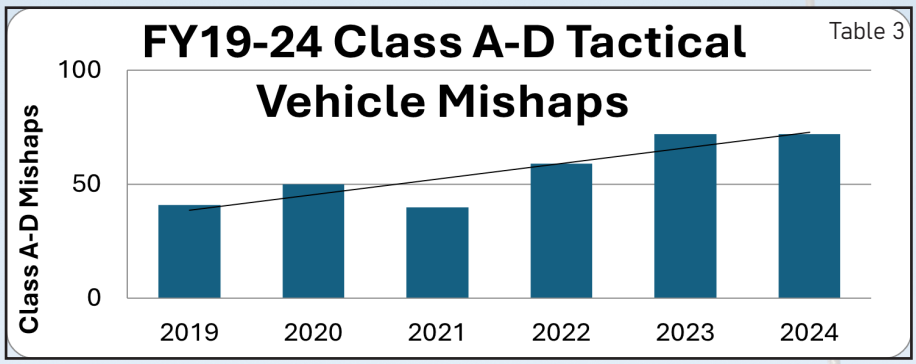
The well-intentioned GDL programs states have adopted to save teen lives are giving the Marine Corps less experienced drivers and when this less experienced driver is put behind the wheel of a tactical vehicle, there are serious gaps.

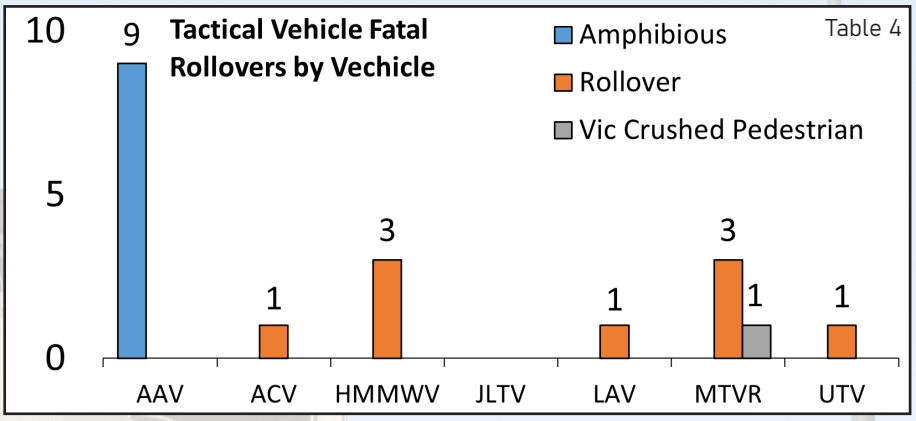


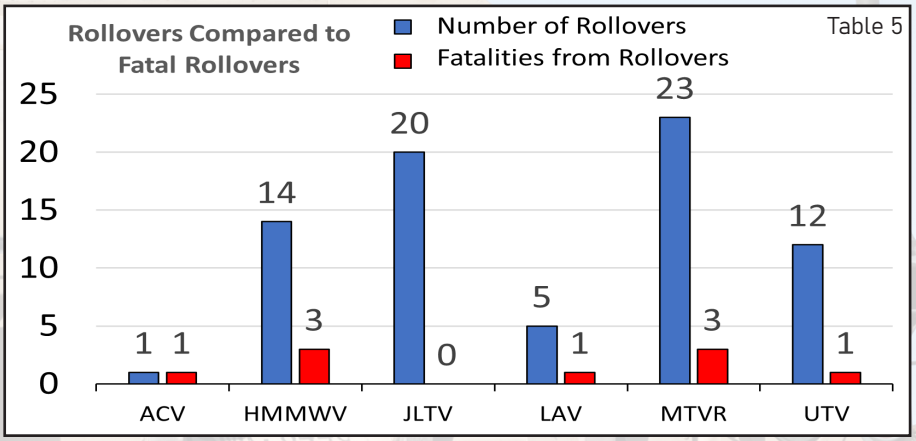
The new vehicles' height, weight and centers of gravity are categorically different from those of the past **(see Table 1)**.

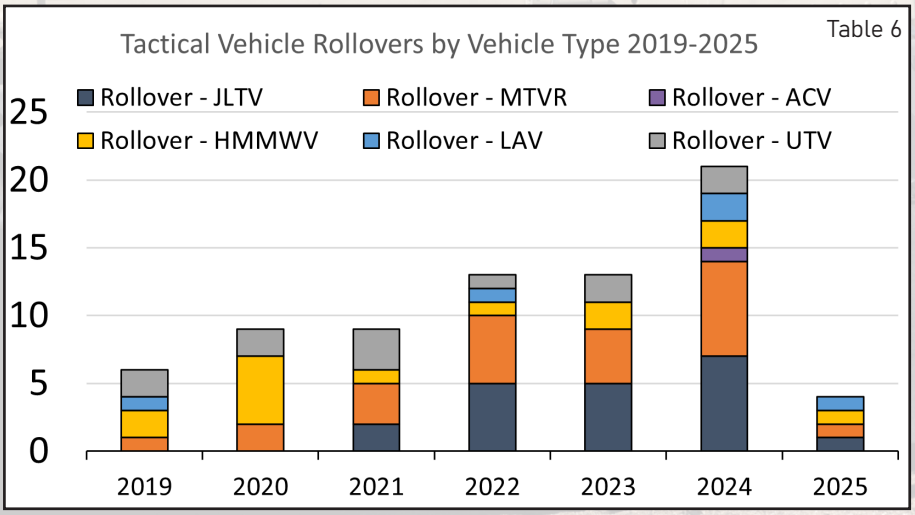
As the new vehicles are transitioned into the fleet, there is also an institutional knowledge and experience gap. If the lance corporal of today is driving one of the new vehicles, how long until he is a master gunnery sergeant who grew up in the fleet with these new vehicles?

There is a hidden risk if the institution treats these new vehicles like the old ones. There is still plenty of time to









mature the systems and develop best practices.

Class A mishaps have stayed consistent since 2019 **(see Table 2)**, however tactical vehicle mishaps Class A-D are increasing **(see Table 3)**.

Rollovers are still the number one cause of tactical vehicle fatalities, **(see Table 4).**

Although not all rollovers are fatal, each rollover is considered a near-fatality miss **(see Table 5),** and rollovers are increasing **(see Table 6)**.

Of note, the Amphibious Combat Vehicle (ACV) is the only ground vehicle capable of a non-fatal Class A mishap because the total cost of the vehicle breaks the $2.5 million threshold to qualify as a Class A mishap. This may lead to unintentional scrutiny of the ACV.

Of note, in the aviation community, assault support mishaps can lead to more fatalities because the aircraft is a troop transport. This is not true with the Medium Tactical Vehicle Replacement (MTVR).

After reviewing the 20 MTVR rollovers, there were several common factors. Most of these rollovers happened when troops were not in the back. Most MTVR rollovers also occurred in smaller vehicle movements. Lastly, speed was the leading cause of the rollover.

Speculation is that the logistics community deliberately plans large convoy movements, especially troop movements. Hence, the fatality rate for rollovers in an MTVR is relatively low. However, rollovers occur in smaller movements, so convoy briefs may not have occurred and drivers were traveling too fast for the terrain. Leaders are encouraged to be engaged, especially with smaller convoy movements, to prevent future rollovers.

Lastly, the Marine Corps is making a few efforts to address the challenges of Marines with less driving experience driving more complex, higher center-of-gravity vehicles. To support these transition efforts, the Marine Corps continues to explore simulators, build a Combat Vehicle Operating Training Range in California at Camp Pendleton and improve how licensing and driver training currency are tracked.

Leadership needs to be engaged and involved as the transition of vehicles occurs and the Marines joining the service today have a different level of driving experience than the generation before.

Senior Enlisted (Gunnery Sgt. and Above): Gunnery Sgt. Pateh Tine

For service excellence as the 1st Marine Division Safety and Environmental Chief, Gunnery Sgt. Pateh Tine has been recognized as the Enlisted Ground Safety Manager of the Year for FY 24. Over the course of his tenure, Tine provided impeccable oversight of the safety programs for the largest major subordinate ommand consisting of 26 subordinate programs and over 22,000 personnel. Tine executed an aggressive inspection program through technical assist visits, inspections and mentorship by fostering 13 programs into effective compliance while correcting 22 findings and 30 discrepancies across 1st Marine Division. Tine's efforts in design and implementation of the G-10 Safety Page on Microsoft Teams in conjunction with the consolidation of all safety files integrated onto the safety page, has aided the respective Safety Officers and Safety Managers within 1st Marine Division alike.

Tine's effective dissemination of information across 1st Marine Division enabled safety representatives to effectively manage their programs through a common location. Additionally, Tine's efforts establishing the Motorcycle Mentorship Program Round Table brought all stakeholders and safety experts together to disseminate best practices and work to solve common programmatic issues. By his professional ability, steadfast initiative and selfless dedication to promoting the Safety Management System within 1st Marine Division, Tine reflected great credit upon himself and upheld the highest traditions of the Marine Corps and the United States naval service.

Officer: Capt. Kyle Andersen

While serving as Division Safety and Environmental Compliance Officer for the 1st Marine Division, Captain Kyle Andersen is awarded the FY 24 Ground Safety Officer of the Year. Over the course of his tenure, Andersen provided highly effective oversight of the safety programs in the largest major subordinate command consisting of 26 subordinate programs and over 22,000 personnel. Conducting an aggressive, thorough inspection program, Captain Andersen's technical assist visits, inspections and mentorship helped bring 13 programs into effective compliance while correcting 22 findings and 30 discrepancies across the Division.

Andersen's efforts developing and implementing the beta testing for the Division Reporting Tool enabled fast, accurate reporting for safety mishap flash reports and paved the way for division wide implementation and future program success. Furthermore, Andersen's efforts establishing the Motorcycle Mentorship Round Table brought all stakeholders and safety experts together to disseminate best practices and work to solve program issues.

By his professional ability, steadfast initiative and selfless dedication to promoting safety in the 1st Marine Division, Andersen reflected credit upon himself and upheld the highest traditions of the Marine Corps and the United States naval service.

WARRIOR PRESERVATION AWARD

For the best maintained and most comprehensive installation safety management system:
Marine Corps Air Facility, Quantico, Virginia

MARINE CORPS SAFETY AWARD

For the best maintained and most outstanding command safety management system
Group I (population over 10,000): **Marine Corps Air Station Cherry Point, North Carolina**
Group II (population 5,000 to 9,999): **Marine Corps Air Station, Beaufort, South Carolina**
Group III (population 4,999 to 1,000): **Marine Aircraft Group 41, Fort Worth, Texas**
Group IV (Population below 1,000): **Marine Corps Logistics Base, Albany, Georgia**

FY24 MARINE CORPS SAFETY EXCELLENCE AWARD

This award is presented each fiscal year to one officer, one junior enlisted, one senior enlisted and one government civilian employee who made the most significant contribution to the Marine Corps Safety Management System.

All nominees are commended for significant contributions made toward reducing mishaps, increasing mission readiness and preserving our most precious asset – our Marines, Sailors and civilians. Congratulations to all for a job well done.

Junior Enlisted (E-6 and Below): Staff Sgt. Justin I Turney

For superior conduct in the performance of his duties as Ground Safety Manager of Marine Light Attack Helicopter Squadron 773, Marine Aircraft Group 49, 4th Marine Aircraft Wing, Staff Sgt. Justin Turney is recognized as the Ground Safety Manager of the Year for FY 24.

Turney demonstrated outstanding leadership and dedication in revitalizing the Ground Safety Program, transforming it from a disorganized and ineffective operation into a robust framework that ensured the safety and well-being of all squadron personnel. Through meticulous review of safety regulations and standards, Turney developed seven essential safety policies addressing critical areas including Risk Management and Emergency Action Planning.

Turney's commitment to training was remarkable; he expertly trained 19 designated Safety Supervisors and Representatives, enhancing safety knowledge across the squadron. His proactive approach to safety management not only mitigated hazards but also set a benchmark for other units. Turney's unparalleled professional ability, initiative and loyal dedication to duty reflected credit upon him and were in keeping with the highest traditions of the Marine Corps and the United States naval service.

Civilian: Mr. Michael Sumpter

For meticulous attention to duty while serving as the 1st Force Storage Battalion Safety Manager, Michael Sumpter is recognized as the United States Marine Corps FY 24 Civilian of the Year. Sumpter maintained outstanding safety oversight management of all 1st Force Storage Battalion (FSB) facilities, storage lots and ensured the overall safety, health and well-being for nearly 200 government employees and contractors working for the command aboard Marine Corps Logistics Base Barstow, California.

Sumpter was directly responsible for managing safety protocols resulting in zero injuries or lost time events for the preceding 33 months. His efforts have also contributed to zero workers' compensation claims within 1st FSB for FY 24.

Sumpter was instrumental in streamlining safety training processes resulting in an average of 99% compliance within the Battalion, demonstrating 1st FSB's commitment to ensuring that all members are adequately trained and prepared to perform their duties safely. Sumpter's efforts during this period resulted in the successful completion of eight battalion safety drills, including: two suspicious packages, four fires, two active shooters, one destructive weather and one earthquake.

Sumpter's performance highlights 1st FSB's preparedness and ability to respond effectively to various emergency situations when required. His ability to anticipate safety requirements and act independently led to superb support to 1st FSB's mission. Sumpter's exceptional professionalism, initiative and total dedication to duty reflect great credit upon himself and align with the highest traditions of the Marine Corps and the United States naval service.

CNO SAFETY AWARDS

NAVAL SPECIAL WARFARE

Naval Small Craft Instruction and Technical Training School (NAVSCIATTS)

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Range Safety and Design

By Karl Powell, Geographic Information Systems Analyst

Imagine seeing the world not just as streets and landscapes but as data layers revealing hidden patterns and connections. That's precisely what geospatial technology does: it transforms ordinary maps into powerful tools helping us choose ideal locations for military exercises, track logistical movements or even find the fastest pizza delivery route.

Whether through GPS guiding military movements, satellite imagery monitoring the battlefield or Geographic Information Systems helping military installations design smarter infrastructure, geospatial technology is the ultimate backstage pass to how the world really works. The best part is it's only getting more advanced, making everyday life more efficient, sustainable and way cooler.

The Range Safety and Design Geographic Information Systems (RS&D GIS) team plays a crucial role in the U.S. Marine Corps by ensuring the safe and efficient use of training areas and ranges for live-fire activities. Using advanced geospatial analysis, the team develops danger zones and tools enabling live fire in areas that might otherwise be restricted, ensuring safe separation between training activities and non-participating personnel.

To optimize training areas while maintaining strict range safety standards, the team conducts technical assistance visits, assessing and documenting current conditions. Additionally, they support developing and maintaining the Range Manager's Toolkit (RMTK), a suite of tools designed to help range personnel and warfighters conduct live-fire exercises safely. The RS&D GIS team plays a key role in testing new releases of tools, disseminating software updates and providing end-user support for RMTK across installations, ensuring the toolkit effectively meets operational needs.

As the functional data set leads for the Military Ranges and Training dataset, the RS&D GIS section is responsible for the final approval, ensuring accurate and up-to-date data serving as the foundation for various geospatial products, including Military Installation Maps (MIMs). These maps are designed primarily for military training and land navigation and produced in accordance with the USMC Range and Training Area Management (RTAM) MIM specification documents.

The RS&D GIS team is responsible for developing these maps and ensuring data from the Military Ranges and Training dataset is accurately represented. Once MIMs are created, they undergo an internal review to verify accuracy and compliance with Marine Corps and National Geospatial-Intelligence Agency (NGA) standards. They are then submitted through the official task tracking system for review by Range Control and USMC Installation Commands Installation Geospatial Information and Services Installation Managers.

The Range Control Officer acts as the Action Officer in the first round of official reviews for the MIMs to assess the maps for relevance to training and ranges on the installation before a final review is conducted by GS-15 or colonel-level senior leadership. Once approved, the maps are cataloged on the NGA print-on-demand site, ensuring high-quality, reliable maps are available for USMC training.

To maximize the efficiency of the Marine Corps, Department of Defense and U.S. Government resources, MIMs are designed for long-term use, typically spanning three to five years.

U.S. Marine Corps Cpl. Bretton Coke, left, a digital wideband systems maintainer and Cpl. Trey Smith, an intelligence surveillance reconnaissance systems engineer, both assigned to the operations control element with 1st Radio Battalion, I Marine Expeditionary Force Information Group, assemble an inflatable satellite antenna at Naval Air Station Fallon, Nevada, during Exercise Resolute Hunter 25-1, Oct. 31, 2024. (U.S. Marine Corps photo by Staff Sgt. Nate Carberry)

These maps are mass-produced, printed and assigned a Reference Number by the NGA, along with a National Stock Number by the Defense Logistics Agency, ensuring easy access and distribution. The RTAM Branch recommends updating MIMs at least every five years to refresh elements such as the declination diagram and magnetic declination, maintaining their accuracy for ongoing use. In addition to standard MIMs, MIM-ICS (Military Installation Map – Installation Commander Special) products are created for short-term, mission-specific needs. These maps are customized based on existing MIMs to address unique planning requirements, such as temporary training areas, future construction, airspace requirements or specialized operational needs.

While MIMs and MIM-ICS are the primary focus, the RS&D GIS section is also supported by an NGA Defense Geospatial Co-Production Program team. This team assists in fulfilling foundational geospatial intelligence responsibilities related to Marine training by generating geospatial features, producing geospatial products and providing geospatial training to Marines and civilians. This effort is particularly valuable for forward-deployed Marines, providing them with accurate geospatial data and tailored mapping products for their specific training needs worldwide.

In an era where precision, safety and efficiency are paramount, the RS&D GIS team is vital in optimizing Marine Corps training areas for mission readiness. The team provides critical mapping and intelligence to support live-fire exercises, land navigation and operational planning through advanced geospatial analysis, meticulous data management and collaboration with key defense agencies. As geospatial technology evolves, the RS&D GIS team remains at the forefront, adapting to new challenges and enhancing Marine Corps training effectiveness. Their work safeguards personnel and resources and strengthens the foundation for future military operations, ensuring Marines have the tools and data to train smarter, safer and more effectively.

Mastering Mission Risk and Contingencies

By Master Chief Special Warfare Boat Operator Brad Rumbaugh, Expeditionary and Special Warfare Small Boat Safety Specialist, Naval Safety Command

In any mission, identifying and mitigating risks and contingencies is critical in ensuring successful outcomes. It is essential to recognize risks and contingencies are not static but evolve throughout the various stages of a mission.

This article will explore how risks and contingencies change during each mission stage, highlighting the importance of adaptability and proactive planning to mitigate potential setbacks.

During the pre-mission stage, risks and contingencies primarily revolve around the initial planning and preparation. This stage involves identifying potential risks, assessing their likelihood and estimating their potential impact on the mission's success.

Contingencies are developed to address these risks, providing alternative approaches or solutions, should the need arise.

The focus is on creating a robust mission plan anticipating and mitigating potential obstacles. As the mission transitions into the launch stage, new risks emerge, primarily centered around the execution of the plan.

These risks are typically associated with technical failures, human errors or unforeseen environmental conditions.

Contingencies during this stage aim to manage these risks, ensuring the mission proceeds as intended. These contingencies may include backup systems, redundancies or emergency protocols to address any unexpected issues during launch.

The execution stage involves primary activities of the mission where risks and contingencies become more dynamic. Risks during this stage may include equipment failures, resource constraints or unforeseen challenges in the operational environment.

Contingencies are designed to address these risks promptly, allowing for quick adaptation and corrective actions. Close monitoring, effective communication and decision-making processes are vital to identify emerging risks promptly and implement appropriate contingencies.

The transition stage marks the conclusion of the primary mission activities and the preparation for the mission's conclusion or handover. Risks during this stage may include incomplete objectives, unsatisfactory outcomes or challenges in transitioning responsibilities.

U.S. Marine Corps Lt. Col. Emanuel Araica, deputy chief, U.S. Naval Mission Colombia, briefs the Security Cooperation Engagement Plan during the Infantería de Marina de Colombia (Colombian marine corps) staff planner working group in Bogotá, Colombia, Oct. 21, 2024. (U.S. Marine Corps photo by Cpl. Madisyn Paschal)

Contingencies ensure a smooth transition and address any incomplete tasks or unexpected outcomes.
Effective communication and coordination between stakeholders are essential to successfully manage these risks and contingencies.
During the post-mission stage, risks and contingencies shift toward assessing and evaluating the mission's outcomes. Risks may include inaccurate data analysis, inadequate documentation or challenges in drawing actionable insights from the mission's results

Contingencies aim to address these risks by implementing robust evaluation processes, verifying data accuracy and ensuring comprehensive documentation. The focus is on extracting valuable lessons learned and recommendations for future missions.

Understanding the changing nature of risks and contingencies throughout various mission stages is crucial for mission success. Risks evolve from pre-mission to post-mission stages and contingencies must adapt accordingly.

Proactive planning, effective communication and continuous monitoring are essential to identify emerging risks promptly and implement appropriate contingencies. By recognizing and addressing these evolving risks, mission planners can enhance their ability to achieve objectives, minimize setbacks and optimize overall mission outcomes.

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