



Best Practices

or “ORM in the Fleet”

HS-5 Creates New Department

To integrate standardization and ORM into everything HS-5 does on a daily basis, the squadron created a STORM (standardization, training, operational risk management) department, combining safety and training departments. The goal is to make ORM everyone's responsibility, not just that of a few select individuals. The STORM department works closely with maintenance and operations to improve and standardize processes. They start with making sure that personnel are trained and have resources available to them, such as checklists and procedures. There is monitoring during the process. Finally, they improve future cycles by submitting and archiving lessons learned and changing publications as required. The new department distributes a weekly ORM scenario called "The STORM Corner." A recent issue dealt with the process of acclimating the large percentage of inexperienced HS-5 personnel to the life and dangers aboard a carrier. Details at: [_http://safetycenter.navy.mil/bestpractices/aviation/HS-5_STORM.htm](http://safetycenter.navy.mil/bestpractices/aviation/HS-5_STORM.htm).

Multi-Faceted ORM during USS *Carl Vinson's* Refueling Complex Overhaul

In 2006, *Vinson* entered Newport News Shipyard for a refueling complex overhaul (RCOH). *Vinson* implemented several proactive and preventive safety initiatives that focused on work-related and off-duty risk assessments. ORM was applied pervasively throughout the ship and within each of the 18 departments. An ORM game plan and risk matrix was required prior to most on-duty and off-duty activities. For example, before starting the ship's force work package and the subsequent assignment of 2,000 personnel to RCOH work teams, ORM checklists were developed for diverse on-duty tasks that included tile removal, demolition, rehabilitation, paint, and work on scaffolds. These risk-mitigation checklists helped to ensure every Sailor was trained and proficient in the procedures for their newly assigned tasks. *Vinson* implemented an aggressive motor-vehicle-mishap prevention program—including two all-hands, high-impact safety stand-downs—designed to educate the crew on the dangers of poor driving choices, including



drinking and driving, speeding, and not wearing seat belts. Among the positive data points was a substantially lower number of “driving while intoxicated/under the influence” events (less than five per month, vice 20 to 40) compared to previous RCOHs involving other CVNs. Details at: http://safetycenter.navy.mil/bestpractices/orm/Vinson_overhaul_shipyard.htm.

Naval Beach Group One (NBG-1) Creates Risk Change Analysis Templates

During a Joint Logistics over the Shore exercise in Guatemala, NBG-1 used a series of templates to guide leaders through the ORM process. JLOTS is a highly dispersed operation, with many high-risk evolutions going on at once. The joint group consisted of 1,000 Army and Navy personnel and involved many kinds of Army and Navy craft. The templates help share knowledge and create understanding of risk management among coxswains, craft masters, beach-party team leaders and other personnel from disparate backgrounds and rates. The template system gets ORM out of the conference room and operationalizes it. During the 24/7 operations, preparing for shift change, deckplate leaders used a template to conduct an ORM analysis based on current conditions. Risks were recalculated based on changes in conditions. The result was an operational pause every 12 hours for the chain of command and the commander to consider the risks involved in continuing operations for the next 12 hours. During the exercise, in conditions that often approached the upper limits of sea state 3 and with heat indexes approaching 110, only one person suffered a serious operational injury. Details at http://safetycenter.navy.mil/bestpractices/orm/NBG1_templates.htm.

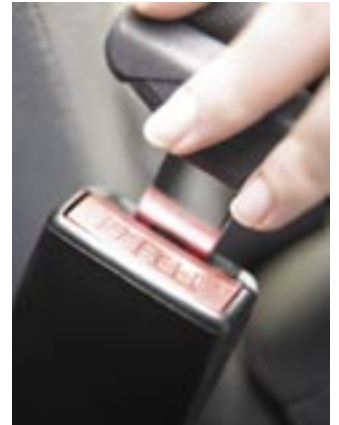
HSL-44 Publishes Traffic-Safety Program Instruction

The instruction says, in part, "Along with being a health hazard when consumed irresponsibly, alcohol becomes a catalyst of danger when mixed with motor vehicles. Not only automobiles, but boats and aircraft, shall not be operated while

under the influence of alcohol." The instruction gives guidance and tools for personnel to make the right decisions when faced with a potentially bad situation. The instruction describes the squadron's safe-driving practices Incentive Program. The instruction lists incentives for work centers that go 90 days without an alcohol-related incident. It also specifies the responsibilities of the commanding officer, executive officer, safety officer, ground safety officer and safety petty officers. "The aim of this instruction is to ensure that our valuable asset of personnel is not squandered in needless accidents," the text continues. Details at: http://safetycenter.navy.mil/bestpractices/traffic/HSL-44_traffic.htm.

Yokosuka Traffic-Safety Program Paying Off

The command reduced all categories of drinking and driving incidents at Yokosuka by 39 percent in calendar year 2006, and reduced the number of accidents by 65 percent during the last five years. Cornerstones of the program include strong leadership in the military and civilian communities; equally strong traffic-safety-committee participation; and a free flow of communications, so that anybody may quickly and effectively get their ideas to decision-makers for consideration and action. "We would not be successful without the support of local commanders embracing our traffic-safety program," said Michael Kretschmer, traffic-safety officer for Commander Fleet Activities, Yokosuka. The command partners with the Japanese police to identify and correct common traffic-safety issues, such as those related to drinking and driving, wearing seat belts, traffic infractions, and licensing criteria. The program also has productive interactions with base security, public health, fire and public works officials to ensure that traffic-safety issues are addressed and corrected. Details at: http://safetycenter.navy.mil/bestpractices/traffic/Yokosuka_traffic.htm.



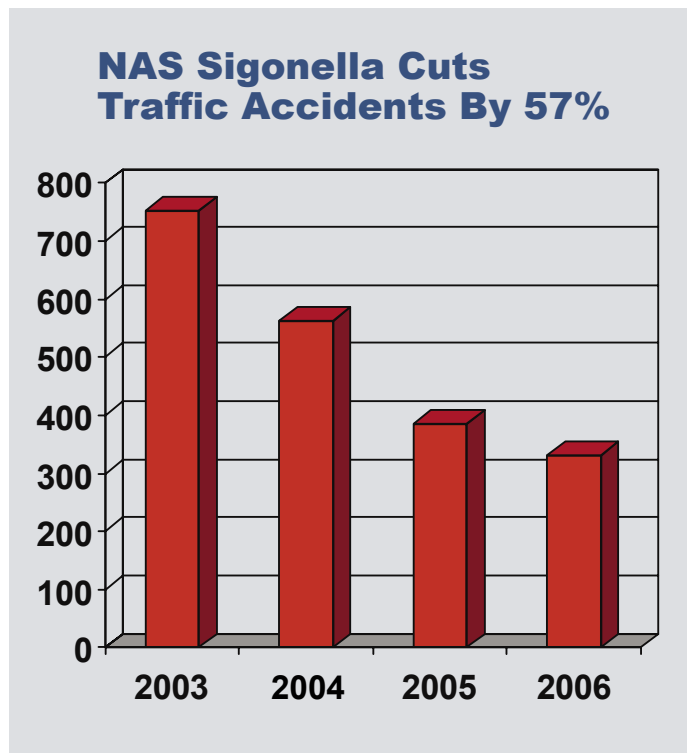
Naval Air Station Sigonella, Sicily, Makes Major Reduction in Traffic Accidents

In 2003, NASSIG had 751 traffic accidents, an average of 2.1 per day. In 2004, Capt. Joe Stuyvesant took command. On his first day as the new skipper, he was on the scene of a serious traffic mishap involving an American. His security and safety staffs confirmed that traffic mishaps were a chronic issue. Capt. Stuyvesant made traffic safety a prior-

ity, involving management and base leadership in a campaign to reduce the number of mishaps. The campaign had three prongs: rewarding positive behavior, educating people, and holding employees accountable.

Numerous intervention and buy-in initiatives have been launched through the years.

In 2003, early efforts were made to provide AAA-DIP



instruction for all incoming personnel/dependents and tailored for local driving conditions. These courses are required before someone can be licensed to drive in Italy. The courses are also provided monthly and required for employees who were involved in a mishap, have gotten a ticket or who were recommended by their command/department for additional training. These efforts were increased in 2004 and 2005.

Efforts in 2004 included:

- Media blitz using both TV and radio to inform personnel of traffic hazards.
- Live TV programming featuring the CO to keep the focus on traffic safety.
- Increased security efforts and patrols. Increased local presence and ticketing.
- Random breathalyzer use at all gates/inbound and outbound vehicle checks.
- Banners at all gates to encourage Sailors and civilians to do the right thing (slow down, don't drink and drive).
- Improved vehicle-safety-inspection program based on stateside requirements.
- Twice-a-year stand-downs focused on traffic safety.

- Increased frequency of motorcycle safety classes (Basic Rider Course) and added the Experienced Rider Course (ERC) for advanced riders.

The command's goal of a reduction to just one mishap per day was achieved in 2005. Activities and initiatives in 2005 included:

- Key chain breathalyzer program initiated as a buddy system to prevent DUI.
- Initiated base's "96 for 96" program to reward commands that go 96 days without a DUI with 96-hour liberty for all hands.
- Annual child-seat inspection and traffic-safety booth set up at commissary/exchange during the spring.
- Reactivated duty-driver program to ensure Sailors a safe way home from local pubs.

2006 set new record mishap low of .9 traffic accidents per day. Efforts in 2006 included:

- Biannual base festivals, with a traffic-safety booth where key chain breathalyzers and other safety materials are handed out and explained.
- Annual motorcycle safety stand-downs for all riders.
- New instruction requiring motorcycle riders to wear reflective vest at all times.

The goal for 2007 is no more than 20 mishaps per month (a rate of .6 mishaps per day).

VAQ-132 Applies Maintenance ORM in the Work Center

VAQ-132 has created a series of ORM briefing cards for common maintenance tasks. The ORM briefing card is not intended to assign probability, severity and RAC codes—rather, it is a way for LPOs to take five minutes to focus on specific hazards before mechs start a task. The cards help an LPO do three things:

- Brief his personnel on potential risks of performing the job before they start the job.
- Identify ways to mitigate these risks.
- Implement controls that will reduce the likelihood of a mishap or improper maintenance.

The cards were laminated and placed in the squadron shops. For a copy of the ORM briefing cards, please contact the CVWP safety officer: Robert.d.wood3@navy.mil. Copies and more information are also available at http://safetycenter.navy.mil/bestpractices/orm/VAQ-132_maintenance_ORM.htm. ■

Training Air Wing Five Uses ORM to Make 156 Safety Improvements

From May 2005 to June 2006, Training Air Wing Five's two advanced helicopter training squadrons had a string of eight flight mishaps that destroyed two helicopters, killed one aviator, and did more than \$1.5M in aircraft damage.

There didn't seem to be any common causal factor that could be blamed for all (or even most) of the crashes. The mishaps involved a variety of maneuvers and a diverse group of instructor pilots. Everyone was motivated to end the streak of crashes, but there wasn't a clear starting point.

Enter ORM—a perfect tool for taking a critical look at an event, figuring out all the ways it can go wrong, and coming up with controls to keep the same thing from happening again. The whole Contact (“Familiarization” for those of you who are old school) phase of helicopter training would have to be scrutinized. The HT squadrons analyzed every facet of the typical Contact flight, from ground procedures to facilities to published training manuals. Their main focus was to dissect 16 individual “high-risk” maneuvers, identifying ways to make the maneuvers safer while still providing effective training.

For step 1 of ORM—Identify Hazards—the panel tried to come up with everything that could possibly go wrong (the mishaps already had pinpointed several different ways). To standardize the hazard-identification process, 18 points were covered for each maneuver, including standardization between squadrons, step-by-step procedures, course training standards, currency and proficiency, and crew-resource management.

For step 2 (Assess Hazards), the panel came up with both initial and residual Risk Assessment Codes, and prepared a detailed report of proposed modifications to the airfield, syllabus, and procedures. Each hazard control was identified as critical, non-critical, or long-term.

The Commodore did step 3, Make Risk Decisions, considering cost, ease of implementation, impact, and time-to-train constraints. Step 4, Implement Controls is still ongoing for some of the long-term recommendations. The final step (Supervise) continues as any changes are observed, new hazards are identified, or control measures don't work as planned.

The panel's evaluation resulted in an extraordinary list of 156 separate improvements to student curricula, flight-training instruction, and Wing SOP. A new instruction called the “Flight Instructor Guide” was generated, giving guidance to instructors concerning how much latitude to give students in allowing them to make and learn from their own mistakes. Classroom and computer-aided instruction were modified to improve understanding of helicopter aerodynamics—specifically the factors that contributed to the mishaps.

Helicopter flight training has been conducted by these two squadrons at Whiting Field for more than 30 years. This ORM review revealed that, even though there was a wealth of experience, knowledge, tradition, and history, many things could be changed to increase safety without sacrificing mission effectiveness. To date, the two helicopter training squadrons have amassed nearly 36,000 flight hours, 19,000 student X's, and eight months of incident-free flying. ■

New Color Scheme for Risk Matrix

This familiar card has been around a long time, but this new version gets the green part in the right place: opposite the red, instead of beside it.

Risk Management Matrix OPNAVINST 3500.39B		P R O B A B I L I T Y			
		A Likely	B Probable	C May	D Unlikely
S E V E R I T Y	I Death, Loss of Asset	1	1	2	3
	II Severe Injury, Damage	1	2	3	4
	III Minor Injury, Damage	2	3	4	5
	IV Minimal Threat	3	4	5	5

1-Critical 2-Serious 3-Moderate 4-Minor 5-Negligible

New Version

The image shows the old version of the Risk Matrix. It is a 4x4 grid with Severity (I-IV) on the y-axis and Probability (A-D) on the x-axis. The cells contain numbers 1-5. The color scheme is different from the new version: 1 is red, 2 is orange, 3 is yellow, 4 is green, and 5 is blue. A legend on the left lists Risk Assessment Codes: 1 = Critical (red), 2 = Serious (orange), 3 = Moderate (yellow), 4 = Minor (green), 5 = Negligible (blue).

Old Version