

Carrier aviation review

The capabilities and characteristics of carrier-based aircraft are changing, and the Navy is working to develop affordable plans to modernize and maintain its aviation assets in light of these changes. The Navy/Marine Corps TACAIR Integration plan focuses on fighter/attack aircraft, and the Helicopter CONOPs addresses the helicopter component of the future carrier air wing. The composition of the remainder of the carrier air wing is less certain. Many argue that future carrier air wings should include 4 to 6 airborne early warning (AEW) aircraft and 4 to 6 airborne electronic attack (AEA) aircraft, but these numbers are hard to justify. Thus, N78 asked CNA, in collaboration with the Naval Air Warfare Center, to examine the required numbers of carrier-based AEA and AEW aircraft in the 2015-2025 time frame. We are assessing the role(s) that ISR UAVs and, to some extent, UCAVs may play in carrier air wings during that time period. We are considering when UAVs can be introduced into the carrier air wing based on known and projected technologies, examining how multiple dual-CV operations may affect carrier air-wing requirements, and developing recommendations for the optimal levels of AEA, AEW, and UAV/UCAV aircraft for the future carrier air wing. (Contact: Mr. Peter Strickland, (703) 824-2925)

Analytical support to Navy TENCAP

The Navy's Tactical Exploitation of National Capabilities (TENCAP) office is a source of innovative solutions to fleet information needs, with emphasis on improving the contribution of space systems to support the fleet. The TENCAP office relies on CNA for rigorous, independent analysis of results. We work with project officers to manage the analytic effort, devise standards, ensure project objectives are amenable to quantitative investigation, develop experimental plans, assist in their execution, and provide objective analytical assessments. We are currently working to support a blue force tracking (BFT) initiative called

Radiant Blue, which is an attempt to develop advanced technologies and leverage some existing national architectures to identify friendly combatants, increase battlefield situation awareness, and reduce fratricide. In the past year, this project has played a critical role in the fielding of several hundred blue force trackers for many mission applications, including in OEF and OIF. Our job is to evaluate performance, highlight discrepancies in displayed tracks, and develop a BFT concept of operations. The next step is full integration into the Joint Task Force Wide-Area Relay Network (WARNet)—a wireless wide-area network. Together, Radiant Blue and WARNet can give ships, soldiers, aircraft, and higher commands a common, near-real-time view of blue forces for better and safer air-to-ground and ship-to-shore engagement performance. (Contact: Dr. Edward Watkins. (703) 824-2743)

MMA force structure and integration

After more than 30 years of service, P-3 and EP-3 aircraft are reaching the end of their useful airframe lives. CNA assessed how the critical warfare capabilities provided by these platforms could best be provided in the future and concluded that manned, land-based aircraft are an essential element for armed, maritime surveillance missions and that an aircraft similar in size to the P-3 was the most cost-effective of the alternatives examined. We also found that the potential exists for increased mission capability with a mixed force of manned aircraft and UAVs. In a follow-on analysis, we addressed MMA force structure and the integration of UAVs into the maritime patrol fleet and concluded that the number of MMAs needed to supply the same number of on-station hours as the current P-3 force of about 225 aircraft ranges between 108 and 130. The exact number depends on the type of aircraft selected for MMA and the expectations for missions that can be carried out by the Broad-Area Maritime Surveillance (BAMS) UAV.

We also found that these peacetime force levels are adequate to meet predicted levels of wartime demand for maritime patrol, but just barely so in the most stressing scenarios. OPNAV N780 has adopted these numbers for MMA program projections, and NAVAIR has said that our results will be one of the principal components of MMA source selection.

BAMS operation is a good fit with the maritime patrol force, but the integration of UAVs into maritime patrol can't be done without significant expansion of maritime patrol personnel, training, and facilities, particularly at tactical support centers. The maritime surveillance aircraft program manager has urged wide distribution of our report to further the development of many of the CONOPs issues we discussed. (Contact: Dr. Peter Ogden, (703) 824-2407)

ESG/ESF assessment study

The Expeditionary Strike Force (ESF) is a new concept for an integrated Navy-Marine Corps Maritime Strike Force consisting of carrier strike groups, expeditionary strike groups (ESG(s)), surface action group(s), and other assigned forces. The Navy and the Marine Corps have asked us to help assess the ESG proof-of-concept deployments and examine the larger issues associated with the ESF concept. Analysts deployed with the ESGs will assess: the degree to which the composition of the ESG will enhance its offensive and defensive capabilities; the interoperability of the assets assigned to the ESG; the most effective command organizational structures; and changes in the composite warfare commander's manual. We will compare and contrast the operational and organizational structure effectiveness of the two ESGs that deploy and assess the "value added" of the ESG relative to a traditional ARG/MEU(SOC). Our Washington-based analysis of the larger implications and issues associated with implementation of the ESF concept will address issues more strategic in nature, focusing on the Navy and Marine Corps' high-level objectives. Some potential issues include the relationship between new and emerging concepts and the ESF such as Sea Power 21 and Expeditionary Maneuver Warfare; the effect of the ESF concept on GNFPP and deployment schedules; different constructs for thinking about the group compositions for the various forces; the impact

of future platforms and technology on ESG and ESF capabilities and concepts of operation; and ESF command relationships. (Contact: Dr. Kim Deal, (703) 824-2403)

Controlling the cost of the FECA program

Each year, the Department of the Navy pays about \$245 million in workers' compensation and related medical benefits under the FECA program. When CNA looked at these costs 3 years ago, we identified two particularly effective programs and suggested that millions in savings might be possible from broader application of their practices. Since then, little has changed. Worse, a new CNA study indicates that program effectiveness has declined. The expected lifetime cost of each DoN claim is now 50 percent higher than in 1999, which corresponds to an increase in the FECA bill of \$11 million a year over the next five years. The reasons for the decline are many, but what is apparent is the absence of effective oversight.

Our new study compared DoN programs and projected future FECA bills. To establish a benchmark for possible improvement, we identified the best 20 percent of DoN programs in terms of their ability to control cost. We compared annual costs expected over the life of an average claim for the best programs, the worst, and DoN as a whole. Portsmouth Naval Shipyard, with its long-time commitment to return-to-work programs, is representative of the best programs. We estimate that savings of \$145 million over five years are possible if DoN as a whole can match the success of its best programs. Of this, some \$50 million can be attributed to better management of older cases, and some \$90 million are attributable to effective management of newer claims. To achieve these savings requires commitment at the activity level to return-to-work efforts. CNA has recommended: (1) the establishment of specialized claims centers to support the evaluation and management of older claims, (2) more focused high-level attention to the performance of local FECA programs, and (3) the establishment of reporting metrics directly related to effectiveness in case management and return-to-work efforts. (Contact: Mr. Michael Bowes, (703) 824-2353)

VA's mail outpatient pharmacy

DoD and the Department of Veterans Affairs are considering using the VA's Consolidated Mail Outpatient Pharmacy (CMOP) system for DoD beneficiaries and asked CNA to evaluate the impact and merits of doing so. One issue was whether the VA could handle this increase in demand. We estimated CMOP's future demand, with and without DoD participation and estimated ways to expand capacity. We found that demand will soon eclipse CMOP capacity. Even without adding new DoD demand, to keep up with the expanding VA demand, the CMOP system would need to close older smaller facilities and replace them with larger ones. We also found that the VA can produce pharmacy refills at costs below rates offered by contractors and below what DoD currently pays for its Tri-care Mail Order Pharmacy. CNA's investment recommendations were adopted, and the VA is building two replacement facilities.

We are now evaluating the TRICARE Management Activity's pilot program at three military treatment facilities (MTFs)—Ft. Hood in Texas, Kirtland AFB in New Mexico, and the Navy Medical Center in San Diego. We visited Ft. Hood and Kirtland to examine implementation, service delivery, and beneficiary satisfaction and observed a number of start-up problems, which the facilities are working to resolve. The MTF staff reports excellent integration with the CMOP staff, improved beneficiary satisfaction, more time to address beneficiary problems, and faster service. We now will evaluate the initiative based on performance, costs, impact on patient outcomes, potential shift from retail refills, and impact on readiness. and help for DoD and VA decide whether the program should be: expanded, continued as is, or discontinued. If DoD and VA decide to adopt the program system-wide, they will have to set appropriate cost-sharing arrangements, and we'll propose options. (Contact: Dr. Joyce McMahon, (703) 824-2334)

Forward deployment analyses

CNA's previous analysis of the Navy's historic role in smaller-scale contingencies and military operations other than war addressed the variety of the U.S. Navy's experience and identified flexibility as the most significant common theme in U.S. Navy history.

That study showed that “at one time or another, the U.S. Navy has tried almost every possible way of procuring, organizing, deploying and employing ships and aircraft.” A current CNA study continues in that vein, focusing on: the Navy's deployment strategy, the Navy's evolving relationship with the Marine Corps and Coast Guard, the Navy as a joint partner, the Navy and Homeland Defense, the Navy and the Unified Command Plan, and the Navy and NATO. These analyses provide Navy and joint staffs and decision-makers with “institutional memory” and an appropriate, tailored historical context of key contemporary issue areas; they are designed to help shape the climate of opinion on these issues; and they also draw conclusions and make analytically based recommendations for current and future policy decisions. As such, they complement other ongoing Navy study and analysis efforts, including related CNA studies, OPNAV's recently established Task Force History, the Naval War College's new Maritime History Department, and the work program of the Contemporary History Branch of the Naval Historical Center. (Contact: Mr. Peter Swartz, (703) 824-2876)

MIO/LIO training for Carrier Battle Groups

Maritime Interdiction Operations/Leadership Interdiction Operations (MIO/LIO) have evolved from purely counterdrug operations and the enforcement of UN sanctions to an important U.S. Navy mission in the war on terrorism. Now more than ever, in the course of their duties, Navy boarding parties must be properly trained and ready to handle noncompliant and/or hostile suspects. As requirements change, so must the training. This CNA study evaluated the training of MIO/LIO personnel and recommended enhancements to the courses currently offered. Our review both of the changes to current training requirements and of the existing Navy Visit, Board, Search, and Seize (VBSS) training program revealed a discernible difference between operational documents written prior to September 11, 2001, and those updated since then. After visiting the VBSS course at Expeditionary Warfare Training Center, Atlantic and examining lessons learned from the *George Washington* battle group, our suspicions were confirmed. Although the current training addresses all requirements in accordance with earlier documentation, the 5-day course is not long

enough to fully prepare MIO teams for their duties. We searched for alternative training courses that enhanced and/or addressed shortfalls of the current VBSS course. Two components are essential for MIO training: maritime (physical boarding and search procedures) and use of force (the full range of tactics from defensive to offensive). We examined courses from both domestic law enforcement agencies and military services that addressed one or both of those components. (Contact: Dr. Dianne Levermore-Thorpe, (703) 824-2267)

Library of CNA documents and databases

OPNAV's intranet, HQWeb, now includes a library of CNA documents and databases related to Navy operations. To date, we have populated the library with documents and databases in four categories. The *Major Operations* category includes all CNA reports on significant Navy operations from Desert Storm in 1992 through Enduring Freedom. The *Crisis Response* category includes analyses and databases of naval responses from 1970 to the present. The *Force Employment and Presence* category has not been populated yet. And, under *Other CNA Publications*, we have posted documents on chemical and biological defense. In time, we hope to add other categories, including ordnance, exercises, readiness, and PERSTEMPO. (Contact: Dr. Gregory N. Suess, (703) 824-2231)

Dr. Gary Federici receives award

Dr. Gary Federici received the Department of the Navy Distinguished Public Service Award in recognition of his work in coordinating CNA support for Navy space analyses and exercises. This award notes that Dr. Federici was instrumental in testing and fielding operational space capabilities that influenced naval operations from Desert Storm through Operation Enduring Freedom and that he played a seminal role in developing Naval space policy and strengthening Naval space organization and management.