

Estimating Casualties: An Essential Part of MAGTF Planning

by the MSTP Staff

'General, the G-3 recommends COA number two,' the current operations officer announced at the conclusion of the COA decision brief. After pausing for a second or 2 to think if he might have omitted anything of significance, he added, 'Are there any questions?' The commanding general sat up slightly in his folding director's chair to survey his assembled staff officers. Taking their silence as his cue, he spoke. 'Outstanding brief. I have just one question before I deliver my decision. Did you include casualty estimates for each COA?' The briefer looked over at the G-1 for a response to the general's question. . . .

Marines do not understand the importance of casualty estimation in Marine air-ground task force (MAGTF) operations. Casualty estimation drives the personnel replacement system, the operational medical support plan, and can assist course of action (COA) decisionmaking during the Marine Corps Planning Process (MCP). According to *Marine Corps Warfighting Publication 3-40.1 (MCWP 3-40.1), Marine Air-Ground Task Force Command and Control*, casualty estimation is the responsibility of the G-1 (personnel). The G-1 works closely with medical planners, G-2 (intelligence), G-3 (operations), and G-4 (logistics) to provide the commander with timely and realistic casualty estimation.

Significance

The casualty estimate is simply a forecast or prediction of the number and types of casualties for a given unit at a specified time and place. It forms the basis of planning for all health services support to include health maintenance, patient collection, patient treatment, temporary patient holding, theater blood requirements, and casualty evacuation, as well as influencing related logistical issues such as graves registration. It also forms the first link in the personnel replacement chain—another G-1 responsibility outlined in

MCWP 3-40.1. The casualty estimates produced in the Operating Forces ultimately reach Headquarters Marine Corps (HQMC), Code MPP-60, where they are used by manpower planners to determine how many members of the Individual Ready Reserve to activate.

Observations From the Field

Observations from recent Marine expeditionary force exercises (MEFExs) indicate G-1s are not maintaining proper oversight of casualty estimation, and medical planners are conducting casualty estimation without the necessary interaction with staff sections or operational planning team (OPT) members. During one recent MEFEx each major subordinate command (MSC) of the MAGTF developed independent casualty estimates on their own initiative. The result was confusion and frustration at the MEF G-1 when personnel planners attempted to reconcile three estimates built on different models and planning guidance. When the exercise concluded, MEF G-1 representatives announced that in subsequent exercises they would provide casualty estimation guidance. Division, wing, and force service support group planners were not authorized to conduct casualty estimation until MEF G-1 provided specific guidance on when and how to do so. At the next year's MEFEx, neither the MEF nor the MSCs produced a casualty esti-

mate. The MEF G-1 had not provided any instructions regarding casualty estimation as promised. On another occasion medical planners did not participate in the casualty estimation portion of operational planning. When queried by MAGTF Staff Training Program (MSTP) observer/trainers about the medical plan, they said they intended to have medical units follow in trace of the maneuver force "in case there are any casualties."

Role in the Planning Process

Casualty estimation is a product of staff coordination led by the G-1 and is developed in concert with intelligence, operational, and logistics planning. Casualty estimation must include medical planners from attached health service organizations. In addition to the G-1 and medical planners, G-2's, G-3's, and G-4's contributions are essential to accurately forecast casualties. Indeed, the casualty estimate is a continuing process of updating and reevaluation that meshes easily with the planning process steps of mission analysis, COA development, wargaming, and comparison and decision. (See Figure 1.)

Ideally, casualty estimation should begin upon receipt of the warning order. Although the estimate at this point in planning would be very general, it provides a starting point. As the

Casualty Estimate in MCPP

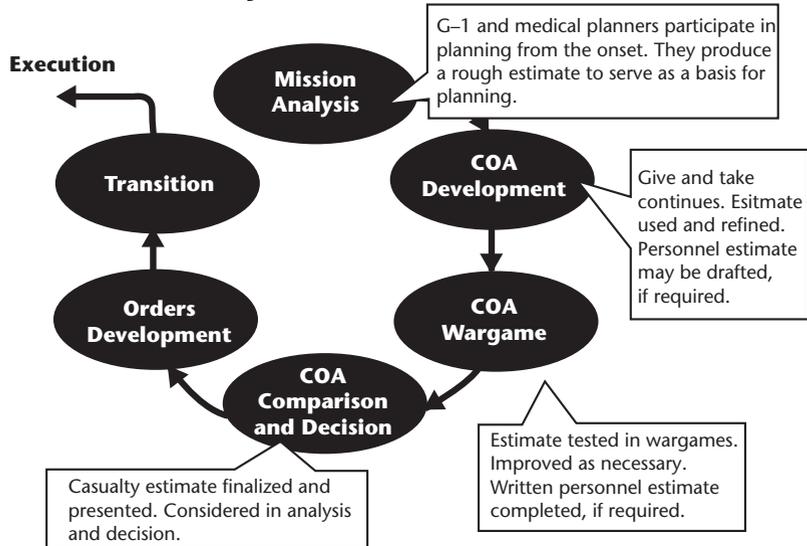


Figure 1.

operational timeline draws nearer to COA development, casualty estimation is refined. G-1 and medical planners take the lead in formulating the casualty estimate as soon as possible in the planning process. They are invited or insert themselves into OPTs, staff conferences, and initial planning sessions in order to create greater appreciation of the personnel and medical situation among other planners and develop their own operational awareness. They must participate in the effort to determine specified and implied tasks, identify resource and subject matter expert shortfalls, determine recommended information requirements, and generate other outputs from mission analysis. They work with the G-2 and G-3 to develop an understanding of those factors that historically have influenced casualty rates and should base their casualty estimation on the products provided at the conclusion of mission analysis. Some of these factors are the type of operations, terrain, character of the enemy, weather and climate, and morale.

Casualty planning continues into the COA development and wargaming steps of the planning process. Preferably, casualty planners should formulate separate casualty estimates for each COA. This will allow planners to refine the COA and may later assist

the commander in producing his concept of operation. Applying the combat power assessment developed by intelligence and operations planners during these steps in the planning process produces more precise casualty estimation. Likewise, planners should validate the casualty estimation during wargaming and remain prepared to adjust the estimate accordingly. COAs are often significantly modified as a result of wargames. Occasionally, existing COAs are aban-

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doned altogether or new COAs adopted in the light of wargame results. The casualty estimate must flex with these changes, while the casualty planners stay involved with the details of COA development and wargaming.

Planners use a variety of means to supplement their own intellect and judgment in developing the casualty estimate. Detailed studies—some classified—are available to calculate the ranges and effects of modern munitions. Historical data concerning casualty rates in operations similar to those being planned are extremely useful and often form the basis of casualty esti-

mates. *MSTP Pamphlet 5-0.3, MAGTF Planner's Reference Manual*, contains an eight-step manual casualty estimation formula beginning on page 63. Copies of this and other MSTP pamphlets are available at the MSTP web site <www.mstp.quantico.usmc.mil>.

Some Marines may have experience with a computer-generated model for casualty estimation called Casualty Estimation Model for Windows (CasEst Win) that provides an automated tool to evaluate plans and estimate casualties. Medical planners often have experience with a program called the medical analysis tool (MAT). MAT may be satisfactory for purely medical planning proposes, but it does not provide the level of detail required by personnel planners to estimate return to duty rates and casualties by grade and military occupational specialty (MOS).

In the final analysis, casualty estimation deals with that chief incalculable in war—the human will. Assumptions that are necessary to develop an estimate may prove to be inaccurate. Opponents thought to be weak and ineffective may render stiff resistance. Conversely, a well-trained and equipped enemy may capitulate or simply run away. The number of unknown variables in casualty estimation has led some Marines to erroneously conclude that casualty estimation is too unreliable for any practical use. They

will cite the Operation IRAQI FREEDOM casualty estimation developed during the initial stages of planning. This estimate differed greatly from the actual number of casualties I MEF received. A short time later,

another estimate was conducted at HQMC using the CasEst Win program. This estimate adjusted the number of Marine forces involved and the duration of the anticipated conflict based on major changes to the original plan. Although the exact numbers produced by this second estimate remain too sensitive to be included in this article, suffice to say they proved to be extremely accurate when compared to the actual numbers of casualties. The Corps is currently in the process of recognizing CasEst Win as the official tool for estimating casualties for future operations.

At the time the staff is prepared to compare COAs and ask the commander for a decision, the casualty estimate must be as complete as possible. Planners must be prepared to stand by a casualty estimate in terms of numbers of casualties expected by category, grade, and MOS for each COA. Time permitting, this side-by-side comparison of the COAs in terms of the casualties may be formally documented in a written personnel estimate. Whether it is communicated formally or informally, the casualty estimate must represent the most accurate prediction of casualties based on all available information by all principal staff sections.

Conclusion

Personnel losses influence every aspect of MATGF operations. Since casualties will constitute the majority of personnel losses during opera-

tions, a timely and logically formulated casualty estimate is an essential component of MAGTF planning. The casualty estimate helps determine personnel replacement, health services, and operations plans. Casualty planners must temper any casualty estimation model with their own judgment, experience, and appreciation of the situation. No tool or model will be universally accurate. Difficult as it sometimes may be, planners must endeavor to balance the art and science of casualty estimation to produce the most accurate casualty estimate possible. The casualty estimate is a collaborative effort between G-1 and Navy medical planners. It is refined through G-2, G-3, and G-4 contributions. This holistic approach will ensure that the MAGTF commander is sufficiently prepared to care for all types of casualties and to efficiently replace personnel losses.

. . . Without a moment's hesitation the G-1 looked at the general and replied, "Sir, I'm glad you asked that question. I used input from the G-2, G-3, and G-4, and worked with our medical planners to develop casualty estimates for each COA. For COA number one we . . ."



>This article is part of a series of articles by the MSTP staff that addresses MAGTF operations and lessons learned. Readers may download copies of these articles on the MSTP web site <www.mstp.Quantico.usmc.mil> under Publications/Team Positions.

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