

## Medical Intelligence as a Tool Enhancing Situational Awareness

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### ABSTRACT

*There have been a lot of publications issued recently on various topics related to deployed servicemen health and wellbeing. All Commanding officers, regardless their level of authority, are aware of the utmost importance healthy and fit soldiers has on every military operation and mission. The aim of the article is to present Medical Intelligence (MEDINT) inputs into Intelligence Summary and Medical support as part of the contingency plan (CONOPS) and operational plan (OPLAN).*

*In order to achieve the set goal by the means of descriptive analyses the features of contemporary warfare are summarized. Comparative and cluster analyses are performed in presenting the MEDINT capabilities to enhance the situational awareness of the Commanders, Medical planners and ordinary servicemen, related to health hazards.*

*In conclusion could be stated that providing significant contributions to IPB and OPP MEDINT is enhancing situational awareness of the Commanders, planners and servicemen towards health hazards and risks they could face during mission execution.*

**Key Words:** *Medical Intelligence, Military Operations, Operational Planning, Medical Support.*

### Introduction:

There have been a lot of publications issued recently on various topics related to deployed servicemen health and wellbeing. All Commanding officers, regardless their level of authority, are aware of the utmost importance healthy and fit soldiers has on every military operation and mission. With the widening of the military geography, despite of the great progress in the medical science, the challenges towards medical support for ongoing and planned military missions are becoming more demanding and complex. The Weapons of Mass Destructions (WMD) are just one of the examples of the health threats that are in continuously development nowadays, and their utilization in military conflicts is not only probable.

The historical evidence is sufficient to classified WMD military implementation as eminent, while analyzing future terrorists' acts or even local conflicts.

To maintain situational awareness and to have clear perception of what the threat consists of, from the beginning of the military development Commanders have demanded to be provided with intelligence data. Military Medical Intelligence Ward established two years ago in Chair Disaster Medicine and Toxicology of Military Medical Academy (MMA), Sofia, is designed to collect, analyze and medical information, thus with its capabilities enhancing Commanders and servicemen situational awareness.

**The aim** of the article is to present Medical Intelligence (MEDINT) inputs into Intelligence Summary and Medical support as part of the contingency plan (CONOPS) and operational plan (OPLAN).

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### Results and discussions:

The article is divided in three main parts. In the first part some of the features of the contemporary warfare are listed. The listed features are mainly those, that differ ongoing military missions from those Armed forces were used to plan and execute prior 1989.

The second part is presenting some of the MEDINT capabilities directly related to operational planning and battlefield preparation.

In the third part the MEDINT inputs to Intelligence preparation of battlefield (IPB) and operational planning process are listed, thus defining how and in what MEDINT extend is enhancing the Commanders and servicemen situational awareness and combat preparedness.

After the “Cold War” era, the military operations engaging large troops confronting in defined combat lines are with very low likelihood to occur. With no opposing military blocs the previously planned military coalitions’ collisions have to be redefined. What Armed forces of developed and developing countries are involved in recent years are mainly international led military operation with goals to provide worldwide security and stability. More frequently the military men are involved in operation other than war – e.g. humanitarian relief operations, peacekeeping or state-stabilizing operations. The characteristics of the enemy have also been changed. The occasions when deployed troops have face to face contact with the ranks of opposing forces are quite rare. More frequently the type of warfare they are involved are guerilla style, or an asymmetric one. The absence of front lines and the likelihood of attack to be performed everywhere and every-when are some of the features of the so-called asymmetric war.

Another characteristic of the contemporary warfare is the deployment of relatively small military contingents, equipped with state-of art weaponry, highly mobile and extremely well trained and equipped to perform their activities, in most of the cases in remote countries or regions. Mainly this contemporary warfare requirement for deploying expeditionary forces literally globally in very short notice to move is the one that distinguish the military activity prior and after the Berlin Wall fall.

In summary the main features of contemporary warfare could be listed as follows:

1. Expeditionary type of military operations and contingents.
2. Preparedness for literally global-wide deployment.
3. Asymmetric and guerilla type of military confrontations.
4. Mainly operations other than war.
5. Multinational military contingents.
6. Military operations frequently performed in remote from the country of origin and hostile environment.

From these features, requirements for proper and timely provided situational awareness are derived. There is no Commander who could lead his/her troops in totally unknown battlespace. Therefore in the preparatory phase of the every military operation commanders regardless their level of authority are demanding information and assessments about available threats and levels of risks their servicemen have to confront.

What are the MEDINT capabilities to provide Commanders with required essential and significant for the military mission outcome assessment.

MEDINT is defined as “the product of the processing of medical, bio-scientific, epidemiological, environmental and other information related to human or animal health. This intelligence, being of a specific technical nature, requires informed medical expertise during its direction and processing within the intelligence cycle”. (1, 2, 3) From the definition could be concluded that MEDINT is intelligence, focused on medical hazards and health threat that have to be performed by analysts with medical knowledge. Therefore it is reasonable to deduce that MEDINT analyst have to be fully involved into IPB. As is mentioned in the definition all the information related to servicemen health has to be collected, analyzed, processed and disseminated by the MEDINT analysts. In order to be plausible for the Commanders, planners and ordinary military rank the collected and processed information has to be presented in a format where the health hazards are identified, health risks assessed and preventive measures listed. All this medical expertise has to be presented in a common military language; otherwise all the efforts would be in vain. Moreover the format has to be on one hand as concise as possible, but on other hand to describe all the scope of hazards and threats to deployed troops' health. Medical Intelligence ward established in MMA has created a template where all the implied tasks are met together with the Commanders requirements. In the created template MEDINT input is in the following three aspects:

1. Health Hazards Identification.
2. Medical Threat Evaluation.
3. Medical Threat Integration.

Based on experience gained during Bulgarian led military missions abroad (4, 5) the template is recommending that the health hazards present in the Area of interest (AOI) have to be found within 10 major groups:

1. Adversary actions
2. Endemic and Epidemic disease
3. Environmental pollution
4. Local Flora and Fauna
5. Climate
6. Geography
7. Healthcare System
8. Road Accidents
9. Stress
10. Others – culture, customs, beliefs, religion, tribal and ethnic division etc.

Medical Threat Assessment includes identification of the potential sources of threat to the health or dangerous substances in the environment (result of the Health Hazards Identification), their evaluation and the likely health consequences on the personnel (contingent) – higher or lower danger of developing unfavorable changes in the health status of the contingent. The Health (Medical) Risk derived from every health hazard has to be assessed.

Medical Risk: The probability identified on the zone of operation health hazard to harm servicemen health status. There are 5 levels of probability:

- Negligible – There is no/ or extremely low probability of the particular hazard to inflict health injury with impact on the mission completion.
- Low – States or diseases whose effect on the contingent is expected to minimally affect the readiness of the contingent for the fulfillment of the tasks.
- Moderate - States or diseases whose effect on the contingent only hampers the fulfillment of the tasks because the number of the affected personnel is small or because the form of the disease developed as a consequence is mild.
- High - States or diseases with adverse effect on the contingent leading to inability to fulfill their tasks either because a large number of personnel have been put out of action or a smaller number has been affected severely.

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- Extremely High – Even with preventive measures taken health disturbance with possible considerable impact on combat deployed contingent’s readiness occurs.

- Medical threat - All evaluated medical risks and their possible impact on servicemen health status and deployed contingent’s combat fit and readiness.

Medical Threat evaluation presents the summarized health risks derived by identified health hazards, their likelihood to cause negative impact on servicemen health, despite of implemented preventive measures, resulting in military mission success endangerment.

Medical threat integration:

- Medical threat assessment contributes to the overall threat assessment presented to Commander as Intelligence summary;

- Medical Threat Assessment is integrated into Medical Support Plan during operational planning process

- Medical Threat Assessment is the required by preventive medicine officers basis for planning force health protection means and measures.

Implementation of the presented template provides MEDINT analysts with the possibility to contribute to IPB – in its first step with identification of health hazards, in the second step of IPB with medical threat assessment, and in the third step with medical threat assessment for every particular course of action.

Similar are the contributions of MEDINT to operational planning process. (6, 7, 8) One of the major inputs MEDINTEL is providing is in the second stage of the OPP – Orientation stage. During the stage two MEDINTEL analysts are performing medical hazards data collection which is included in the overall threat assessment. During the phase medical analysts assume different options for hazards’ likelihood to inflict harm to deployed troops health. Usually the medical threat assumptions are part of the mission statement briefing as a part of threat identified.

During courses of action development (Stage three) MEDINTEL is performing medical threat assessment for every particular course of action discussed. Evaluating the impact of health hazards during every possible military activity MEDINTEL is providing planners with crucial information about friendly forces capabilities to preserve manpower and to protect combat readiness of the deployed troops. The main contribution is to the Intelligence summary and to the medical support part in the contingency plan.

Stage four of OPP – operational plan development is one of the most overloaded phases for the MEDINTEL analysts. During this phase MEDINTEL products are used in Intelligence annex, in Force Protection annex and reasonably in the medical support plan. Providing information for identified health threats and levels of the health risk MEDINTEL is contributing to the overall threat assessment. With the health risk assessment and linked to it preventive measures recommendations is significant contributor to Force Health Protection.

As MEDINTEL is continuously performed data collection, analyses, processing and dissemination it is reasonable to conclude that with notification of every change in the assessed health threat MEDINTEL is contributing to the phase five of OPP.

In summary MEDINTEL input to OPP could be presented as follows:

- Input to Intelligence Summary.
- Input to Medical Planning.
- Input to Force Protection.
- Input to Courses of Actions.
- Input to CONOPS and OPLAN Development and Revision.

In conclusion could be stated that providing significant contributions to IPB and OPP MEDINT is enhancing situational awareness of the Commanders, planners and servicemen towards health hazards and risks they could face during mission execution.

Reference:

1. BI-SC 65-7, Policy and Procedures for NATO's Medical Intelligence Programme, 28 Feb 05. // <http://nsa.nato.int/nsa/>
2. AJP-4.10 (A), Allied Joint Medical Support Doctrine, Mar 06. // <http://nsa.nato.int/nsa/>
3. Allied Joint Medical Doctrine For Medical Intelligence Ajmedp-3 November 2008 // <http://nsa.nato.int/nsa/>
4. Beloknsky E., Katarov K., Kanev K et all. Crises, terrorists acts and missions abroad Medical Support. Editor Major General Tonev S. // Military Medical Academy, Sofia, 2007.
5. Kanev K, Petkov A, Dragnev V. Medical support in crises situations. Military Medicine:supplement 1: 3-5, 2006
6. Bi-SC 80, Guidelines for Operational Planning, Jan 01. // <http://nsa.nato.int/nsa/>
7. MC 133/3. NATO's Operational Planning System. // <http://nsa.nato.int/nsa/>
8. MC 326/2. NATO Principles and Policies of Operational Medical Support. 07 Apr 04. // <http://nsa.nato.int/nsa/>

