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TITLE: Post-Deployment Phase Medical Status Monitoring Functions

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Post-Deployment Phase Medical Status Monitoring Functions

Colonel Vasiliy VARUS, M.D., Ph.D.

Research Institute of Military Medicine of Ukraine Armed Forces,
One, 11 th Liniya Str., Irpen 08200, Kievskaya region, Ukraine.

History shows that even in peace time, the State sometimes forces military specialists to work under conditions which demand a maximal mobilization of the body functional reserves. Vivid examples are the participation of the Ukraine Armed Forces in the emergency and clean-up operations after the Chernobyl disaster and in the process of dismantling the Ukraine nuclear weapon arsenal, the need to maintain high levels of professional skills and combat strength among military personnel notwithstanding limited materiel supplies and serious financial problems, and the participation of the Ukraine peacekeeping contingent in a multinational military mission.

Successful task performance among military personnel is based on their professional capabilities. Taken together, these can be considered as the combat potential that is needed to attain tactical, physical and psychological superiority over adversaries. However, statistics show that a significant part of the specialized troops in the Ukraine Armed Forces, who have high levels of training level and long operational experience, leave the Armed Forces prematurely due to health problems.

An analysis of the behavior and the functional status of these individuals has revealed that they have a reduced resistance to the impact of extreme physical and psychosocial stressors. A study of Ukraine Armed Forces Research Institute of Military Medicine has demonstrated that occupational hazards combined with insufficient physiological, hygienic and social protection of military personnel should not just be considered as risk factors, but are actually causing damage to the body on cellular, organ, and systemic levels. In view of the need to implement adequate counter measures, a permanent monitoring system has been set up in order to screen the health status of personnel and to evaluate potentially damaging conditions and factors. A military-medical computer data-base was created by the Military-Medical Service of the Ukraine Armed Forces, as an integral part of a national population health monitoring system. The main task of this hygienic monitoring activity is to provide the military-medical authorities with adequate information.

The computerized data-base of the Ukraine Armed Forces is based on a territorially allocated system of software and databases which are integrated in a standardized information environment through computer networks and telecommunication means. This system makes it possible to survey the health status of military personnel on three levels (national, regional and territorial), to collect and analyze health status indices, and to design diagnostic, treatment and rehabilitation measures.

The health monitoring among the Ukraine contingent participating in an international mission was carried out in two phases. In the first or deployment phase, the main emphasis was on identifying all significant health risk factors at the area of deployment, and on the implementation of primary countermeasures. In the second or post-deployment phase, the impact of specific military and environmental factors on health status during the mission was determined, and a preventive rehabilitation program was put in action.

We found that there was a substantial increase in the incidence of combat and non-combat traumas and diseases during deployment, due to the impact of various adverse factors (combat injury, psycho-emotional and physical overload, disorder of a daily rhythm, poor hygienic, nutrition and household conditions, etc.). Our findings indicated that the most important health effect was a very high incidence rate of professional stress, which manifested itself in frequent severe complications of common infectious illnesses and aggravation of chronic diseases. There were also indications that the medical selection of the military personnel had been inadequate, that the professional qualifications of many soldiers were insufficient, and that there were frequent cases of mental and behavior disorders. The levels of stress experienced by the Ukraine military personnel were distributed as follows: mild: 53%, moderate: 33%, severe: 10%, very severe course: 4% of all cases. Incidence rates of common diseases was 1 per person/year and the total number of chronic diseases was 64 cases per 100 persons/year. The pathology multitude coefficient was established as 1,5. We found that the risk factors during deployment primarily affected the psycho-emotional functions of the military personnel (more than 60 % of all cases), and furthermore, in decreasing order, the digestive system (13%), the skeleto-muscle system (12 %), heart and circulation (10%),

and the nervous system (5 %). These data correspond to those found in a study of chronic diseases among military personnel. As we determined by long-term observation, the most important stressors were:

- Working in conditions of discomfort (night and daily duty, physical and mental overload);
- Lack of required materiel and supply;
- Poor housing conditions (25% of the soldiers);
- Family problems (financial, economic and other).

An analysis of the occupational health risks associated with the conditions under which the military tasks were performed, indicates that deployment phase stress contributed significantly to the subsequent deterioration of the health of the military personnel and to the premature termination of their professional careers.

Based on the findings obtained during the social-hygienic monitoring of the Ukraine peacekeeping personnel, specialists of the Military-Medical Register have developed measures for preventive, curative and rehabilitation in order to minimize the negative health-related consequences of international military missions.

The planned measures fall into six categories:

1. Improving the professional selection procedures;
2. Expansion of the medical control system;
3. Improving the individual and collective protection of military personnel against injuring factors;
4. Improving the combat exercise conditions;
5. Improving the quality and effectiveness of patients care;
6. Implementation of measures aimed at health restoration and rehabilitation.

As we have determined, these measures can be realized even under the current complicated social and economic conditions of Ukraine Armed Forces. Implementation of the proposed measures will move along with the implementation of the new organizational model of the Military-Medical Service in Ukraine and it will not require any additional tasking.

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