

Medical support and health problems in soldiers of the PMC Afghanistan in a case study of Giro and Qarabagh military bases

Zabezpieczenie medyczne oraz problemy zdrowotne żołnierzy PKW Afganistan na przykładzie baz wojskowych Giro i Qarabagh

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Abstract. Aim: The article presents the structure and tasks of health services supporting the Polish Military Contingent in Afghanistan in a case study of two military bases being a part of the BRAVO Battle Group. The article also discusses the disease profile of the Polish service members who were provided with pre-specialist medical assistance by army medics. Material and methods: The retrospective analysis was based on medical records of 123 soldiers relocated to Giro base and 147 soldiers assigned to Qarabagh base in the period October 2010 – March 2011. Calculations were based on the structure rate and intensity rate per 100 persons. Results: The most common health problems diagnosed in the groups of soldiers serving in both bases were diseases of the respiratory system, non-battle injuries, dermatoses as well as gastrointestinal and musculoskeletal diseases. Conclusions: Level 1. medical support, which was secured by army medics tasked with providing pre-specialist medical aid in the coordinated cooperation with the specialist medical assistance at level 2 (Medical Support Group), provided military personnel with the optimum of health and life protection in the theater of operations.

Key words: Afghanistan, morbidity, Polish Military Contingent

Streszczenie. Cel: W pracy przedstawiono strukturę i zadania służby zdrowia Polskiego Kontyngentu Wojskowego w Afganistanie na przykładzie dwóch baz wojskowych wchodzących w skład Zgrupowania Bojowego BRAVO. Omówiono profil chorobowy polskich żołnierzy zaopatrywanych przez ratowników medycznych w ramach pomocy przedlekarskiej. Materiał i metody: Analiza retrospektywna została oparta na dokumentacji medycznej 123 żołnierzy pełniących służbę w bazie Giro oraz 147 żołnierzy w bazie Qarabagh w okresie październik 2010 – marzec 2011. Obliczenia wykonano w oparciu o wskaźnik struktury oraz wskaźnik natężenia w przeliczeniu na 100 osób. Wyniki: Do głównych problemów zdrowotnych żołnierzy obu baz należały choroby układu oddechowego, urazy niebojowe, dermatozy oraz choroby układu pokarmowego i narządu ruchu. Wnioski: Zabezpieczenie medyczne poziomu 1. realizowane przez ratowników udzielających pomocy przedlekarskiej w skoordynowanym współdziałaniu ze specjalistyczną pomocą lekarską poziomu 2. (Grupa Zabezpieczenia Medycznego) pozwalało na optymalną ochronę zdrowia i życia żołnierzy na teatrze działań.

Słowa kluczowe: Afganistan, Polski Kontyngent Wojskowy, zachorowalność

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Introduction

The Polish Task Forces White Eagle, formed from the Polish Military Contingent (PMC) deployed to Afghanistan,

were set up in November 2008. They are an element of the Brigade Battle Groups in the Regional Command East, which assumed responsibility for the Ghazni province. Soldiers serving in the Polish Military Contingent

were relocated to Ghazni and Vulcan bases belonging to the ALPHA Battle Group, and to Warrior, Giro and Qarabagh bases belonging to the BRAVO Battle Group [1]. The main tasks of the PMC Afghanistan included ensuring stability in the Ghazni province, securing the reconstruction projects carried out in the Polish area of responsibility, controlling the situation in the vicinity of the main thoroughfare in the country – from Kabul to Kandahar, as well as training the Afghan army and police. The main tasks of health services supporting the Polish Military Contingent in Afghanistan involved health prevention, treatment of diseases and injuries, medical evacuation of the sick and wounded, medical reporting, procurement of medicines and medical equipment, coordinated cooperation between different levels of medical evacuation and specialist training of medical personnel [2]. In the period 2010–2011, military personnel assigned to the BRAVO Battle Group were performing mandated tasks in two bases, both situated at an altitude of more than 2,000 meters above sea level, Giro (2,090 m) and Qarabagh (2,012 m). Soldiers serving in the two bases were provided with medical assistance on an outpatient basis (level 1 of medical evacuation) by army medics.

The principle tasks of medics were as follows:

- outpatient treatment of the sick and wounded soldiers in the base, providing medical assistance outside of the base in case of emergency,
- regular check-ups for soldiers serving in the PMC, vaccinating soldiers in line with the established schedule,
- specialist training of the PMC personnel,
- sanitary supervision in the area of deployment,
- medical reporting,
- organizing medical evacuation to a higher level,
- maintaining readiness for participating in the Coalition Forces medical evacuation system,
- providing medical support during patrols, convoys and other tasks carried out by the Polish Task Forces in Afghanistan [3].

Outpatient medical facilities, which were run by army medics, were established in Giro and Qarabagh bases. In both bases there were four-person groups equipped with APC *Rosomak* adapted for overland medical evacuation. Medical support in both military bases involved staged treatment and evacuation of the sick and wounded to higher-level medical facilities. Sick or wounded soldiers, who required specialist medical assistance, were evacuated by air to the Medical Support Group in Forward Operating Base Ghazni (level 2). Military personnel requiring long-term treatment and rehabilitation were transferred to level 3 (U.S. Combat Support Hospital in Bagram Airfield) and then to a level 4 medical facility outside the theater of operations (Military Institute of Medicine in Warsaw, Poland). Level 1 medical facilities

provided military personnel with basic medical assistance, specialist first aid, segregation of the sick and wounded, resuscitation and stabilizing vital functions. In addition, medical personnel serving at level 1 facilities offered commanders of the bases advice on preventive medicine [4].

Aim

The aim of the article is to present the structure and tasks of medical support provided to the Polish Military Contingent in Afghanistan in a case study of two military bases – Giro and Qarabagh. The article also discusses the disease profile of Polish soldiers who received pre-specialist medical assistance from army medics.

Material and methods

The retrospective analysis was based on medical records of 123 service personnel deployed to Giro and 147 personnel in Qarabagh. The study population was treated on an outpatient basis and, according to indications, at the medical evacuation level during the 8th rotation of the PMC Afghanistan from October 2010 to March 2011. The analysis of the disease profile was based on medical documentation of 157 initial visits in Giro and 231 initial visits in Qarabagh. The study formed the basis for calculating the structure rate and intensity rate of diseases and injuries per 100 persons. The most common diseases and injuries were analyzed in line with the ICD-9-CM classification: diseases of the respiratory, circulatory, digestive, musculoskeletal systems, dermatoses, diseases of the nervous system, sense organs, genitourinary system, mental disorders and injuries. Detailed diagnoses of particular disease entities were analyzed in compliance with the same classification. The basis for calculating the intensity rate was the number of initial visits according to diagnosed diseases or injuries (excluding check-up visits for the same disease entity within 2 weeks) used as a numerator and the total number of patients treated throughout the given period used as a denominator ($n = 123$ in Giro and $n = 147$ in Qarabagh, respectively), multiplied by the coefficient $C = 10^k$ ($k = 0, 1, 2, 3, \dots$, in the statistical analysis $k = 2$). The intensity rate was used to calculate the incidence of diseases and injuries per 100 persons in the study population. STATISTICA PL software was used to calculate the final scores.

Results

The research demonstrated that the most common health problems occurring in the group of 123 soldiers relocated

Table 1. Incidence of diseases and injuries among soldiers deployed to FB Giro from October 2010 to March 2011 (n = 123)
Tabela 1. Występowanie chorób i obrażeń ciała wśród żołnierzy pełniących służbę w bazie Giro w okresie 10.2010 – 03.2011 (n = 123)

Diseases and injuries	Soldiers treated on an outpatient basis (number of patients n = 123)		
	Number of cases	Structure rate [%]	Intensity rate (per 100 persons)
respiratory	47	29.9	38.2
non-battle injuries	25	15.9	20.3
skin	21	13.4	17.1
gastrointestinal	21	13.4	17.1
musculoskeletal	19	12.1	15.5
nervous	8	5.1	6.5
heat injuries	4	2.5	3.3
battle injuries	3	1.9	2.4
eye	2	1.3	1.6
ear	2	1.3	1.6
dental	2	1.3	1.6
circulatory	1	0.6	0.8
genitourinary	1	0.6	0.8
psychiatric	1	0.6	0.0
total	157	100.0	127.6

Source: PMC Afghanistan. Own studies

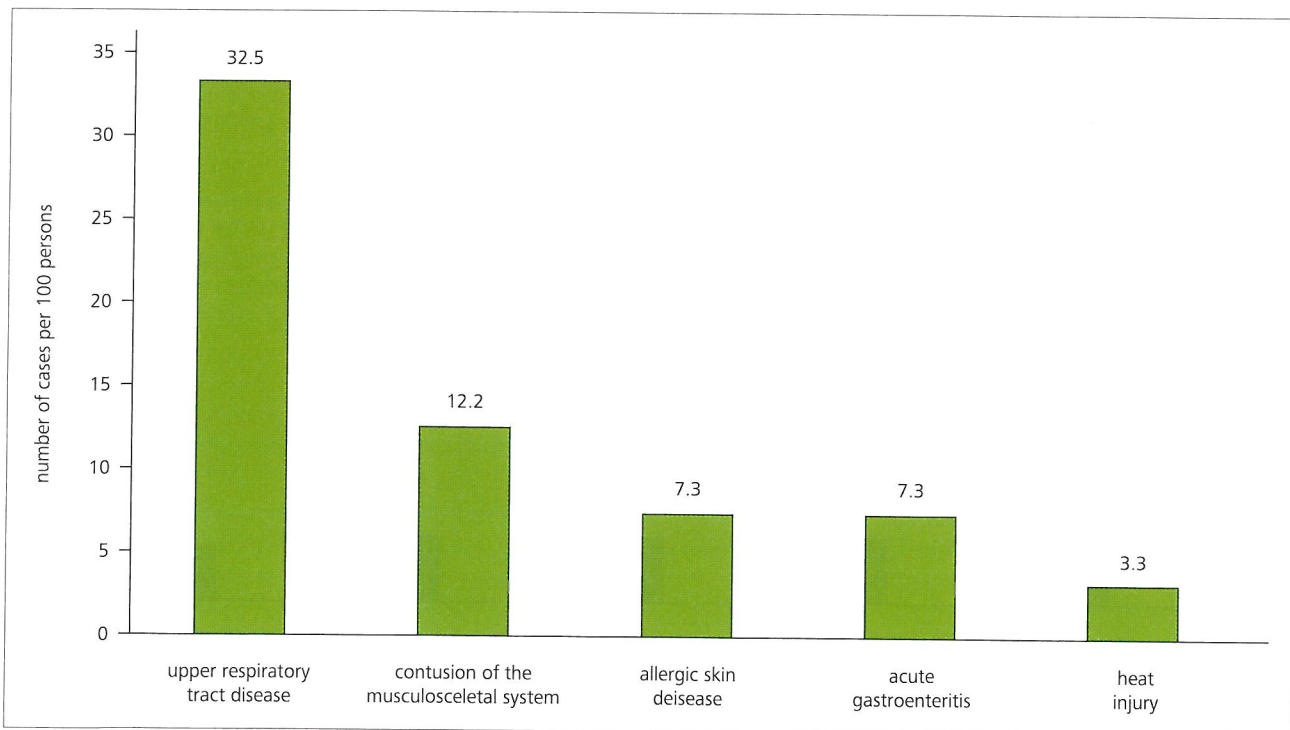


Figure 1. The most common disease entities reported in soldiers serving in FB Giro from October 2010 to March 2011 (n = 123)
 Source: PMC Afghanistan. Own studies

Rycina 1. Najczęściej raportowane jednostki chorobowe wśród żołnierzy pełniących służbę w bazie Giro w okresie 10.2010 – 03.2011 (n = 123)

Table 2. Incidence of diseases and injuries among soldiers deployed to COP Qarabagh from October 2010 to March 2011 (n = 147)
Tabela 2. Występowanie chorób i obrażeń ciała wśród żołnierzy pełniących służbę w bazie Qarabagh w okresie 10.2010 – 03.2011 (n = 147)

Diseases and injuries	Soldiers treated on an outpatient basis (number of patients n = 147)		
	Number of cases	Structure rate [%]	Intensity rate (per 100 persons)
respiratory	89	38.5	60.5
skin	32	13.9	21.8
non-battle injuries	28	12.1	19.0
gastrointestinal	23	10.0	15.6
musculoskeletal	23	10.0	15.6
heat injuries	10	4.3	6.8
nervous	7	3.0	4.8
psychiatric	7	3.0	4.8
dental	5	2.2	3.4
circulatory	3	1.3	2.0
ear	2	0.9	1.4
eye	1	0.4	0.7
battle injuries	1	0.4	0.7
total	231	100.0	157.1

Source: PMC Afghanistan. Own studies

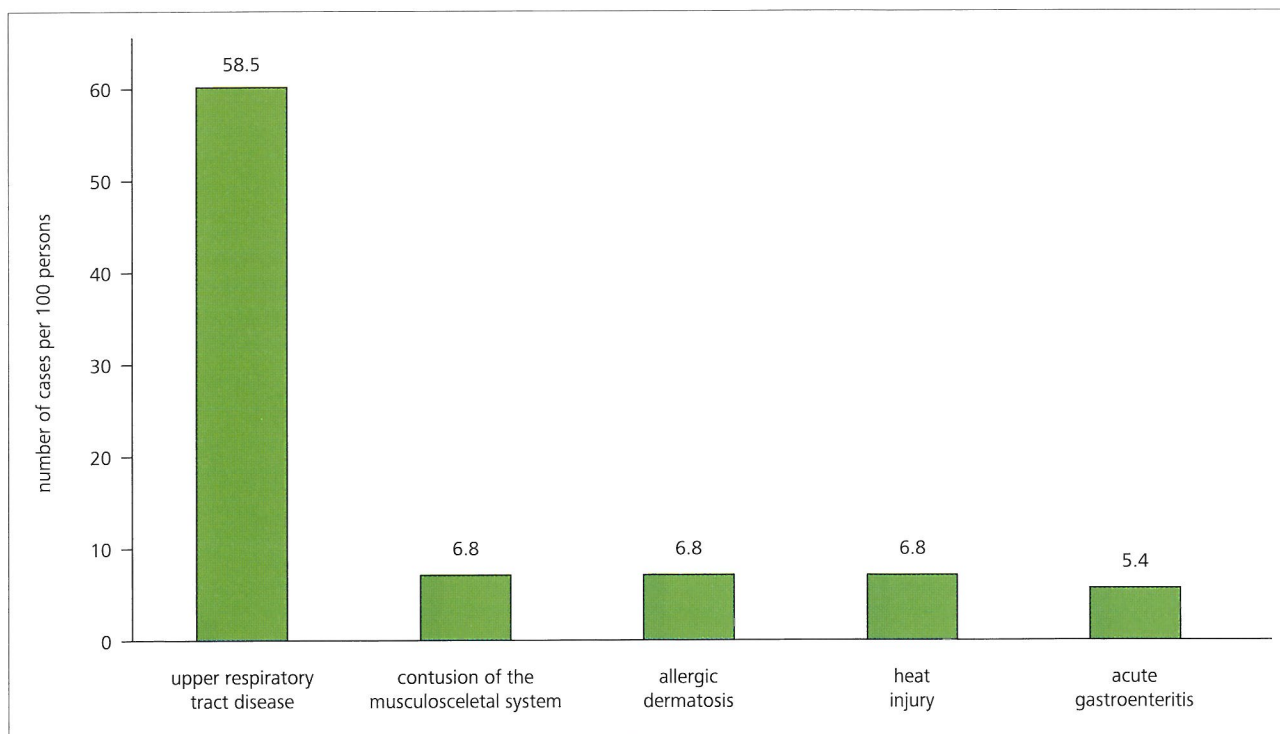


Figure 2. The most common disease entities reported in soldiers serving in COP Qarabagh from October 2010 to March 2011 (n = 147)
 Source: PMC Afghanistan. Own studies

Rycina 2. Najczęściej raportowane jednostki chorobowe żołnierzy pełniących służbę w bazie Qarabagh w okresie 10.2010 – 03.2011 (n = 147)

to Giro base in the period October 2010 – March 2011 were respiratory system diseases (29.9%, 38.2/100 persons), non-battle injuries (15.9%, 20.3/100 persons), dermatoses (13.4%, 17.1/100 persons), gastrointestinal diseases (13.4%, 17.1/100 persons) and diseases of the musculoskeletal system (12.1%, 15.5/100 persons) (Table 1).

The most common illnesses entities treated on an outpatient basis by medics working in Giro base were: upper respiratory tract disease, allergic dermatitis, heat injury, contusion of the musculoskeletal system and acute gastroenteritis (Figure 1). The incidence of the aforementioned health problems was greatly affected by environmental conditions (high sun radiation, considerable temperature change within 24 hrs, dust storms), poor sanitation in the area of deployment, apparent disregard of health prevention measures. They also included sports injuries and injuries being the effect of performing everyday military duties.

Health problems diagnosed and treated on an outpatient basis by army medics in the population of 147 service personnel assigned to Qarabagh base were broadly similar to health disorders occurring among service members in Giro. The most commonly reported cases included respiratory system diseases (38.5%, 60.5/100 persons), dermatoses (13.9%, 21.8/100 persons), non-battle injuries (12.1%, 19.0/100 persons), gastrointestinal diseases (10.0%, 15.6/100 persons) and diseases of the musculoskeletal system (10.0%, 15.6/100 persons) (Table 2).

In the majority of cases, soldiers serving in Qarabagh base, just like military personnel in Giro, required treatment for upper respiratory tract disease, allergic dermatitis, heat injury, contusion of the musculoskeletal system and acute gastroenteritis (Figure 2).

Conclusions

The incidence of health problems in the populations of soldiers deployed to Giro and Qarabagh bases was largely determined by the effects of climatic conditions, low level of sanitation, disregard for basic health prevention measures; it was also the effect of injuries suffered while taking part in sporting activities or injuries sustained while carrying out mandated duties. Medical support at level 1, which was secured by army medics tasked with providing pre-specialist medical aid in the coordinated cooperation with the specialist medical assistance at level 2 (Medical Support Group), provided military personnel with the optimum health and life protection in the theater of operations.

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