

Health hazards against the background of the current epidemiological situation in Afghanistan

Zagrożenia zdrowotne na tle aktualnej sytuacji epidemiologicznej Afganistanu

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Abstract. Afghanistan, a country situated in Central Asia, is continuously at war. Due to devastated communal and industrial infrastructure, countless natural disasters, limited access to food and health care, Afghanistan has been considered one of the poorest countries in the world for decades. Demographic and epidemiological indexes of the country are estimated to be the lowest in the world. Afghans are dependent on international humanitarian aid. One of the organizations whose primary aim is to fulfill stabilization functions but also to provide humanitarian assistance is the International Security Assistance Force (ISAF). The forces include the Polish Military Contingent, which has been assigned to the Ghazni province since 2008. This article discusses health hazards present in Afghanistan against the background of its current epidemiological situation in the aspect of Polish participation in the extremely difficult military operation. Moreover, it discusses the structure and capabilities of the Afghan health service both at a national level and within the Ghazni province.

Key words: Afghanistan, epidemiology, health hazards

Streszczenie. Afganistan, kraj Azji Centralnej uwikłany w niekończące się konflikty zbrojne, ze zniszczoną infrastrukturą komunalną i przemysłową, licznymi klęskami żywiołowymi, ograniczonym dostępem ludności do żywności i opieki medycznej, od dziesięcioleci należy do najuboższych państw świata. Afgańczycy mają najgorsze na świecie wskaźniki demograficzne i epidemiologiczne, są uzależnieni od międzynarodowej pomocy humanitarnej. Do grupy organizacji spełniających funkcje humanitarne, ale przede wszystkim stabilizacyjne należą siły koalicyjne ISAF, w skład których wchodzi również Polski Kontyngent Wojskowy, stacjonujący od 2008 r. w prowincji Ghazni. W pracy przedstawiono informacje na temat zagrożeń zdrowotnych występujących w Afganistanie na tle aktualnej sytuacji epidemiologicznej kraju, w aspekcie udziału naszych żołnierzy w jednej z najtrudniejszych operacji wojskowych. Omówiono również strukturę i możliwości afgańskiej służby zdrowia na poziomie ogólnokrajowym oraz na szczeblu prowincji Ghazni.

Słowa kluczowe: Afganistan, sytuacja epidemiologiczna, zagrożenia zdrowotne

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Introduction

According to the UN ranking classifying 182 countries in terms of their wealth and economic development Afghanistan is placed on the last but one, i.e. 181st position. This means Afghanistan is considered to be one of the world's poorest countries. Labor-related mortality is estimated second-highest in the world (one out of eight Afghan women die from labor-related complications),

infant mortality is also second-highest (151/1000 live births) and the mortality among the entire population is the third-highest (17.65/1000 inhabitants per year). One out of five Afghan children die before reaching the age of 5, and the average life expectancy is estimated at 44 [1].

The number of deaths connected with warfare or other acts of violence among civilians remains at a substantial level. From January until September 2010 more than 7 400 clashes between fighting squads occurred.

As a result of those fights 2 400 Afghans died, and according to the UN reports 2/3 of them were killed by the Taliban.

The UNHCR, a United Nations agency mandated to protect and support refugees, announced that internal displacement remains a considerable problem in Afghanistan. In recent years as many as 297 000 Afghan people have been forced to flee their homes. In 2009 the number of internally displaced persons (IDPs) reached 60 000. The majority of IDPs come from the western and southern provinces of the country, i.e. the territory of ongoing hostilities either between the ISAF and the Taliban or between armed gangs fighting over the sphere of influence, especially in drug trade. Thousands of refugees come from central and northern parts of the country affected by floods in the winter-spring season or by droughts in the summer. IDPs typically squat in makeshift camps, mainly in Kabul or Herat, where access to food, drinking water, health service or education is seriously limited [2]. The total number of the Afghan population is estimated at 29–30 million people. However, it is impossible to calculate the exact number of the country's inhabitants due to mass external migration (following the overthrow of the Taliban regime as many as 5 million Afghans returned to their home country, yet, approximately 3 million Afghan people still live abroad, mainly in Pakistan and Iran) and over 2 million nomads (kuchi) who are not settling in one permanent location but choose to migrate from one place to another.

Despite terrible demographic and epidemiological indexes, some progress has been achieved. 85% of the population is able to reach a primary health care center within one hour (68% of patients have to reach the place on foot) compared to merely 2% in 2002 (the quality and accessibility of medical services is yet another issue). More than 1 650 qualified midwives, whose task is to provide professional assistance to a mother and a child during and after childbirth, were employed by the Ministry of Public Health. This measure made it possible to reduce infant mortality by 23%, thus saving 80 000 newborns every year. Also, under-5 mortality has been reduced by 26% compared to 2002. Health care provided in Afghanistan still hugely depends on non-governmental organizations (NGOs). Private health service is expanding steadily and nowadays as much as 60% of the Afghan population has used private medical services at least once.

Shortages in medical staff at all levels negatively affect epidemiological supervision and efforts to limit the number of infectious diseases. For instance, despite all the attempts aimed at eradicating poliomyelitis the number of all cases of the disease registered in Afghanistan increased from 7 in 2004 to at least 24 in 2009. The only reasonable way to fight the disease remains a mass scale vaccination campaign, which in case of poliomyelitis have already covered 7 million children,

i.e. 90% of the under-5 population [3]. Population growth rate in Afghanistan is estimated at 2.47% per year (compared to 4.77% in 2005) [3,4]. The total fertility rate is estimated at 5–6 children per one woman. Merely 19% of infants are delivered by professional medical staff [5]. The Afghan population is exceptionally young; an average Afghan is 18 years old. The age structure in Afghanistan is as follows: 0–14 years old (43.6%), 15–64 (54%), over 65 (2.4%) [1]. In recent years there has been a noticeable improvement in the education system. The number of children aged 6–9 attending school has increased by 40%, although only 35% attend school regularly. Despite this change merely 37.6% of Afghans aged 15–24 are literate (51% of men and 22% of women) [6].

Afghanistan is considered to be a country of high risk as far as the occurrence of infectious and invasive diseases is concerned. This is largely influenced by contamination of water and soil (sewage, excrement, and pesticides), disastrous condition of sewage systems, water and sewage treatment plants, limited access of the population to health care centers, shortages of basic medicines and medical equipment, a large number of asymptomatic carriers of certain contagious and parasitic diseases among the local population and mass migrations [7–9]. Merely 31% of all households have access to uncontaminated drinking water: 16% of Afghan nomads, 26% of the people living in rural areas (at least 20 liters per person) and 64% of people inhabiting urban areas (at least 50 liters per person). Contamination of water with pathogenic microorganisms is widespread, which results in the increased occurrence of diarrheal diseases in the Afghan population. Diarrheal diseases are especially widespread among children under 5 and remain one of the main causes of morbidity and mortality for this age group. Only 5–7% of the population has access to lavatories meeting sanitary requirements [10]. More than 50% of the Afghan people are chronically malnourished [11]. Accessibility to medical services in Afghanistan in relation to existing needs (the number of inhabitants) is seriously limited due to a small number of health care centers which are well-equipped and employ qualified medical personnel. It is also limited because of poorly developed road infrastructure impeding transportation, which in a mountainous Afghanistan (70% of the Afghan territory are highlands and mountains and the average altitude is 1 200 meters) is of fundamental importance [12]. Shortages of female personnel at all levels of medical services remain yet another difficulty for the Afghan health care system. The majority of childbirths take place at home and a woman is typically assisted by an unqualified midwife. Prenatal practice is virtually non-existent [13]. International NGOs frequently provide Afghan health care centers with high-quality diagnostic equipment (ultrasound scanners, X-ray, laboratory testers). However, it is frequently the case that the equipment is not

used as Afghan medical personnel cannot operate it or there are no means to maintain and service such modern apparatus. Unfortunately, foreign humanitarian assistance is often unprepared and badly organized.

The list including major causes of death in Afghanistan is characteristic of the Third World countries and it differs significantly from the profile typical in developed countries. The most common causes of death include diarrheal diseases and communicable parasitic diseases (malaria), battle injuries and emaciation due to malnutrition (in developed countries the major causes of death remain cardiovascular diseases and neoplasm). Owing to the fact that both diagnostic and therapeutic capabilities of the Afghan health service are limited it is frequently the case that Afghans are treated through trial and error (reports on morbidity rates are rarely confirmed by laboratory tests), and by means of a very limited range of medication. Additionally, a lack of awareness of certain sanitary principles and widely understood health prevention do not improve health condition of the Afghan population. In order to improve the epidemiological situation in Afghanistan a special health strategy covering the period 2008–2013 was formulated by the Ministry of Public Health in cooperation with international NGOs. The strategy recommends the implementation of health care programs, including vaccination campaigns and development in medical infrastructure [12]. Afghanistan is still almost exclusively dependent on foreign funding. 75% of all expenditure on health care in Afghanistan comes from governmental and non-governmental international organizations, especially from the United States Agency for International Development (USAID), the World Bank and the European Commission. Only 25% of the expenditure on medical care comes from the Ministry of Public Health of the Islamic Republic of Afghanistan. International funds are primarily allocated for the execution of health programs aimed at reducing the rates of morbidity for such diseases as tuberculosis, malaria, HIV/AIDS, as well as reconstruction of damaged medical infrastructure and construction of the new one. In the period 2004–2008 the total number of 731 health centers were built or rebuilt and equipped thanks to international humanitarian aid. As a result medical services can now be provided to as much as 85% of the Afghan population.

Health hazards prevalent in Afghanistan

Food & water-borne diseases

Regardless of the season the occurrence of diarrheal diseases is commonplace in the territory of Afghanistan. This fact is primarily associated with unsatisfactory sanitary standards as well as contamination of food and water with human and animal excrement. Seemingly, diarrheal diseases do not pose a serious health problem

among the local population as the number of asymptomatic carriers of parasitic and contagious diseases is quite high [9]. In fact, diarrheal diseases are the cause of death of as much as 32% of the under-5 population. An estimated 85 000 Afghan children die from diarrheal diseases every year [14]. The main etiological factors of diarrheal diseases diagnosed in Afghanistan include enterotoxigenic *Escherichia coli* O157 (110 laboratory confirmed cases in 2008), *Salmonella* (160 laboratory confirmed cases in 2008), *Shigella* (155 cases including 8 deaths in the Kandahar province) adenoviruses and protozoa (*Entamoeba histolytica*, *Giardia intestinalis*) [15,16]. The incidence rate of amebiasis among the Afghan population are estimated at the level of 3%, while the incidence rate of giardiasis among children reaches 11% [17]. Helminthiasis of the digestive system are also widespread in the territory of Afghanistan. It has been estimated that 90% of the Afghan population may be infected with at least one parasite [17], yet the data has not been confirmed by screening. Afghanistan remains the only country associated in the Organization of Islamic Cooperation (consisting of 57 countries) which has gathered no data whatsoever regarding the occurrence of parasites of the digestive system among its population [18]. Even in international literature reports on the incidence of intestinal parasites in Afghan population are scarce. 51 Afghan refugees fleeing to the US were subjected to medical tests in the 1980s. 32% of the studied group was diagnosed with the following pathogens: *Ascaris lumbricoides* (5 people), *Giardia intestinalis* (5), *Entamoeba histolytica* (4), *Hymenolepis nana* (3), *Trichuris trichiura* (1). Pathogens of strongyloidiasis, ancylostomiasis or necatoriasis which are endemic in the territory of Afghanistan were not revealed in this small group of refugees [19]. The only research into the incidence of intestinal parasites conducted in Afghanistan within the last decade was carried out in the population of children aged 8–15 ($n = 1001$). The research revealed the occurrence of helminthiasis of the digestive tract in 47% of the examined group. The most frequently detected diseases included ascariasis (41% of the diagnosed infestations) and trichuriasis (10%) [20]. Cases of hepatitis E have also been found in the territory of Afghanistan. At the turn of 2006 and 2007 an outbreak of hepatitis E occurred in the Laghman province, 33 cases of the disease were laboratory confirmed [21]. Cholera is yet another disease found in the territory of Afghanistan. It is not one of the most common infectious diseases of the digestive tract occurring among the Afghan people; nevertheless, it poses some serious health hazards because of its endemicity and the risk of transforming into a severe form. New cases of cholera are diagnosed in Afghanistan nearly every year in the summer. In 2009 673 cases of cholera were registered in 1/3 of 34 Afghan provinces [22]. An outbreak of cholera occurred in the northern

part of the Ghazni province in August 2010. At least 130 people were taken ill (in 60 cases the disease was laboratorily confirmed) [23].

Air-borne diseases

Air-borne diseases remain one of the major causes of morbidity and mortality in the under-5 population in Afghanistan (13% of all deaths). Incidence rate is especially high in refugee camps, as overpopulation and mass migrations are the primary factors contributing to the occurrence of such diseases [24]. The main etiological factors inducing respiratory tract infections are: *Streptococcus pneumoniae*, *Mycoplasma pneumoniae* and *Haemophilus influenzae* [7]. In recent years mass infections with the A/H1N1 virus have posed a serious health hazard among the Afghan population. The first case of the disease was diagnosed in a US Forces soldier assigned to the Bagram Air Field base in July 2009. In the same year another 320 cases of A/H1N1 influenza were diagnosed in the population of American and Italian soldiers serving in the ISAF and additional 390 cases in the population of soldiers serving in the Afghan National Army. The research conducted in 2009 among the local people suffering from respiratory tract infections revealed 456 cases of A/H1N1 influenza, including 11 deaths (mostly among the citizens of the country's capital city – Kabul) [25]. Tuberculosis (found in all Central Asia) is yet another endemic disease which creates a real health hazard in the Afghan population. Over 28 000 new cases of TB (including 160 cases of TB in which the source of infection was cattle) and more than 9 000 deaths were registered in 2008. The occurrence and spread of the disease is mainly influenced by two factors. The first one is a low percentage of children immunized with the BCG vaccine (82% in 2009); the other is the co-occurrence of diseases lowering natural immunity of a person. It has been estimated that 0.2% of patients suffering from TB are HIV-positive [26]. Since 1996 the World Health Organization has recommended tuberculosis control and treatment strategy abbreviated to DOTS (*Directly Observed Therapy – Short Course*). While this new strategy has been widely used in the whole world, it is still rarely practiced in Afghanistan. Therefore it is extremely difficult to successfully fight the disease there. A policy formulated by the Afghan Ministry of Public Health is aimed at diagnosing at least 70% of new cases and successful treatment of 85% of patients suffering from TB by means of DOTS [27].

Other airborne contagious diseases occurring in the territory of Afghanistan include childhood diseases subject to a vaccination schedule. Incidences of measles (2 861 cases in 2009) and pertussis (2 448 cases in 2008) have been registered in the whole territory of Afghanistan [28]. The latter disease have been given particular attention by medical services of the ISAF when in 2007 27 patients (the ISAF personnel: 24 French, 2 British,

1 Polish) with clinical symptoms similar to those of pertussis were treated in the French field hospital in Kabul. The disease was laboratorily confirmed in 6 cases. None of the infected patients has been vaccinated against pertussis since childhood [29].

Sexually transmitted diseases

Some sexually transmitted diseases, including gonorrhea, chlamydia infection and trichomoniasis are widespread in Afghanistan [30]. Also, hepatitis B and C transmitted via sexual intercourse pose serious epidemiological risk. A research carried out in Kabul in the population of 464 drug addicts taking drug injections revealed that 6.5% of the studied group was infected with hepatitis B, while 36.6% with hepatitis C [31]. Another research conducted in the population of prostitutes in Kabul, Jalalabad and Mazar-e-Sharif demonstrated hepatitis B in 6.5% and hepatitis C in 1.9% of the studied group [32]. According to the World Health Organization the incidence rate of HIV/AIDS has been increasing in all parts of Central Asia, including Afghanistan. However, the exact number of Afghans who are either HIV-positive or suffer from AIDS is not known. The Ministry of Public Health in Afghanistan has estimated the number of infected at a low level – not exceeding 0.5% of inhabitants of productive age. 636 new HIV infections and 10 deaths from AIDS were laboratorily confirmed in 2009. In the territory of Afghanistan the main source of infection are drug addicts taking injections and prostitutes. The number of drug addicts taking injections is estimated at 19 000–25 000.

1–18% of the population is considered to be HIV-positive. The total number of all drug users (taking injections, taking drugs orally or via the nose) is estimated at 920 000, i.e. 3.2% of the country's population. According to calculations made by the Ministry of Public Health there are 1 160 prostitutes working in 3 major Afghan cities – Kabul, Herat and Mazar-e-Sharif, of whom 893 live and work in Kabul. Their clients are mainly truck drivers whose total population in Afghanistan is approximately 60 000. Less than a half of them are using condoms, thus increasing the risk of becoming a potential source of an STD infection [33].

Vector-borne diseases

Malaria. The incidence rate of malaria has been systematically decreasing within the last decade. Until 2002 the World Health Organization has estimated the number of malaria infections in Afghanistan at 2.5–3 million cases per year. 52 228 cases of infections diagnosed and treated as malaria were registered in Afghan health centers in 2008. Laboratory tests confirmed 21 148 cases of the disease. 58 deaths from malaria were reported within the same period [34]. The highest incidence rate was observed in Nangarhar, Badakhshan and Kandahar provinces [35]. In Afghanistan malaria is endemic in areas

lying below 2 000 meters above sea level [36]. An estimated 20.6 million Afghan citizens live in areas where the disease is transmissible [37]. However, a research carried out by the WHO experts demonstrated that malaria can also be found at higher altitudes as some cases of the disease were diagnosed in the population inhabiting the Bamyan province (2 250–2 400 meters above sea level) [38]. *Plasmodium vivax* remains the primary etiological factor in more than 90% of all cases. However, in recent years an increasing number of infections have been induced by *P. falciparum* (1% of all cases in 1974, 7% in 2007) [5,39]. A study conducted in the Kunduz province revealed that in areas where rice is cultivated the etiological factor of malaria is mainly *P. vivax*, whereas in other areas *P. falciparum* prevails [40]. The disease is transmitted by mosquitoes of the *Anopheles* genus (in Afghanistan it is mainly *A. culicifacies* in rural areas and *A. stephensi* in urban areas, and also: *A. superpictus*, *A. fluviatilis*, *A. pulcherrimus*) [41]. In the vicinity of Jalalabad (the Nangarhar province), in irrigated rice fields, the morbidity rate is 240 cases per 1 000 inhabitants every year [42]. Transmission of the disease typically takes place from the end of March until the beginning of December.

Leishmaniasis. Two types of leishmaniasis: cutaneous and visceral (*kala-azar*) can be observed in the territory of Afghanistan. Cutaneous leishmaniasis is caused by *Leishmania major* (the source of infection are animals, e.g. gebrils) and *L. tropica* (the source of infection are people) [7]. The majority of cases are caused by *L. tropica* [43]. The disease is transmitted by a bite of certain species of sand flies of the *Phlebotomus* genus (*Ph. sergenti*, *Ph. papatasi*, *Ph. caucasicus*). The cutaneous form of leishmaniasis is commonly found in urban areas, particularly in Kabul, the country's capital, which is estimated to be the largest center of this disease in the world. A massive surge in the incidence of cutaneous leishmaniasis (from 17 000 to 65 000) was registered in 2009 [44]. Apart from Kabul the disease is endemic in 7 provinces of Afghanistan, e.g. in Herat (in the west), in Kandahar (in the south) and in Parwan (in the central part of the country) [45]. In 2005 numerous instances of cutaneous leishmaniasis caused by *L. major* were diagnosed in the population of Dutch soldiers engaged in the Enduring Freedom operation and serving in the northern parts of Afghanistan. Lesions characteristic of the disease occurred in 172 out of 938 soldiers (18.3%) subjected to medical treatment in the form of injecting quinquivalent antimony into skin lesions and cryotherapy [46]. Visceral leishmaniasis (*kala-azar*) is caused by *Leishmania donovani*. The sources of an infection are animals (dogs, foxes, jackals). This form of the disease is rare in comparison to the cutaneous form. It is endemic in the western parts of Afghanistan; however, current epidemiological data concerning the disease are unavailable [47]. The first

instance of *kala-azar* in the territory of Afghanistan was diagnosed in 1982. 21 cases of the disease had been reported until 1990 [48]. 2 cases of visceral leishmaniasis were diagnosed in US soldiers engaged in the Enduring Freedom operation in the period 2002–2003 [49]. Another 2 instances were reported in Mazar-e-Sharif in 2005. Both visceral and cutaneous leishmaniasis is transmitted from April until October [48].

Crimean–Congo hemorrhagic fever (CCHF). 27 cases of an infection with symptoms characteristic of a hemorrhagic fever (including 16 deaths) were registered in the Herat province in 2000 [50]. In March 2002 unidentified hemorrhagic fever killed 28 people inhabiting the eastern parts of Afghanistan [49]. Another 5 instances of Crimean–Congo hemorrhagic fever were diagnosed and laboratorily confirmed in the Herat province in 2008; 2 out of 5 treated patients died [51]. In 2009 an American soldier evacuated from Afghanistan died of Crimean–Congo hemorrhagic fever in a U.S. Forces hospital in Germany [52].

Zoonoses

The most commonly occurring zoonosis in Afghanistan is definitely rabies. The disease is endemic in all parts of Central Asia and the sources of infection are typically infected dogs. Until 2001 the World Health Organization estimated that only in Kabul 4 new instances of rabies in people were registered every day. Currently the risk of becoming infected is particularly high in rural areas [49]. 4 cases of rabies were diagnosed in people living in Nuristan province in 2010; the patients had been bitten by infected dogs [53]. Another animal-borne disease found in the territory of Afghanistan is brucellosis. The source of the disease are commonly non-pasteurized dairy products coming from infected animals. 746 instances of the disease were reported in 2008 (3 015 cases in 2007) [54]. Another zoonosis found in Afghanistan is anthrax. New cases of the disease had not been registered for several years – until 2007 when 33 new instances of anthrax were diagnosed in people (4 cases in 2008) [55]. The disease is transmitted through contact with an infected animal or consumption of infected meat. Airborne transmission may also occur, i.e. a person inhales pathogenic microorganisms which remain in the air. The primary source of an anthrax infection in Afghanistan are sheep and goats. In recent years, however, instances of a disease with a clinical picture similar to the one of anthrax were found among camel breeders in Nimruz province and cattle breeders in the Badakhshan province [57].

Injuries

Afghanistan remains one of those countries where the risk of a terrorist or a criminal attack is particularly high. Bombings, captures, kidnapping and thefts are all commonplace in Afghanistan. In addition to this a frequent cause of death in the Afghan population are injuries

being the result of a traffic accident. Afghans, like many other Muslims, appear completely unconcerned about traffic regulations or simply they are not familiar with them. Additionally, both roads in Afghanistan and vehicles moving across the country are in a disastrous condition. All these factors make overland travel (there is no railway in Afghanistan) extremely dangerous. Another, far more serious, threat to life and health of the Afghan people are mines and unexploded ordnance. An estimated 7 million antipersonnel (95%) and anti-tank (5%) mines, remnants of the past military conflicts, can still be found in the territory of Afghanistan [58,59]. Unexploded ordnance pose additional health hazard. 10 to 12 Afghan people die or get injured in a mine explosion every day. And despite a lengthy process of demining the country (400 000 antipersonnel mines have already been removed within the last decade) Afghanistan with its 780 square kilometers of minefields remains one of the most heavily mined countries in the world [10]. The most heavily mined provinces of the country are Herat and Kandahar. Yet, even in Kabul, which is the country's capital, there are still some minefields waiting to be cleared. The majority of mines and unexploded ordnance are considered to have been laid in pastures (61%) and cultivated fields (26%) [60]. A result of a mine explosion is commonly death or an injury, such as amputation or multiorgan injuries [61,62]. Mortality rate due to the aforementioned injuries reaches 50–55% [63].

The structure of health services in Afghanistan

Health service in Afghanistan is structured traditionally – in a way characteristic of other countries lying in Central Asia. The lowest level of health service in Afghanistan is represented by a Community Health Post (CHP) which employs appropriately trained non-medical social workers, who typically admit patients at their own homes. A Community Health Post provides health care for 1 000–1 900 inhabitants, i.e. 100–150 families. Another medical unit in the structure of the Afghan health service is a Basic Health Center (BHC). It represents a higher level of health service than CHP. Theoretically, a BHC is supposed to employ at least 1 nurse, 1 midwife and 2 staff responsible for the vaccination program. It should provide medical services for 30 000 inhabitants. Comprehensive Health Center (CHC) is yet another medical unit functioning in Afghanistan. It provides a wider range of services than BHC. It should be equipped with a laboratory (having diagnostic capabilities at a basic level). In addition to this a CHC ought to employ a larger number of medical personnel (physicians, nurses, midwives, a pharmacist and a laboratory analyst). A CHC is supposed to offer medical services to 30 000–100 000 inhabitants. A District Hospital (DH) is the major health care facility providing basic and specialized medical treatment at the district level.

A DH typically employs a number of different specialists: an internist, a surgeon, an anesthesiologist, a pediatrician, a gynecologist, an obstetrician, a psychiatrist, nurses, midwives, an X-ray operator, a laboratory analyst as well as a dentist and a dental technician. A District Hospital should have a total of 30–75 beds and it is supposed to provide medical treatment for 100 000–300 000 patients inhabiting 1–4 districts. Patients who cannot be successfully treated at a CHC or a DH are normally transferred to a Provincial Hospital (PH) offering a much wider diagnostic facilities and employing a greater number of medical personnel than any of the previously mentioned health care centers. In Ghazni, the capital city of the Ghazni province, where the biggest military base of the Polish Military Contingent has been deployed, there is but 1 Provincial Hospital. A PH typically has a total of 100–200 beds and in comparison with a District Hospital it also offers rehabilitation services, therapeutic treatment and supervision over contagious and parasitic diseases. National Hospitals (NH) and Specialty Hospitals (SH) remain referential medical centers for all other hospitals of a lower level. National Hospitals and Specialty Hospitals are general hospitals functioning as an educational and training facility for medical staff. They are usually located in Kabul, the country's capital city and they each have a total of 200–400 beds. They provide a range of specialized medical services in urology, neurology, plastic surgery, cardiology, endocrinology, dermatology, pulmonology and oncology. Theoretically, the postulates concerning health care system proposed by the Ministry of Public Health seem to be beyond reproach. In practice, however, there are serious shortages of medical personnel (especially female staff) at all levels. Owing to this fact health service in Afghanistan does not function effectively. In areas afflicted with hostilities or remaining under the Taliban control health care facilities are normally closed down or controlled by groups of extremists. Due to this fact access to medical assistance in certain areas is seriously limited. A great number of medical centers require renovation as well as new diagnostic and treatment equipment. It is commonly the case that a local medical unit has no electricity or running water. If the Afghan health service is to function effectively certain construction projects (of power grid or sewage systems) need to be carried out. In recent years a well-developed private medical sector has been a strong competition for public health service. This, however, is sometimes problematic, e.g. there is nothing unusual about a high-ranking public official being an owner of a private medical center, including hospitals. This obviously leads to some misuse of authority such as maldistribution of public finance. Corruption and nepotism are also widespread in Afghanistan. None of these features facilitate efforts to improve the health care system or the epidemiological situation in Afghanistan.

Health service in Ghazni Province

Ghazni is one of the 34 provinces in Afghanistan in the east of the country. According to administrative division established in 2005 Ghazni Province is divided into 19 districts. Currently there are 4 hospitals in the territory of the province (1 Provincial Hospital in Ghazni City, the capital of the province, and 3 District Hospitals in Andara, Jaghori and Qarabagh). There are also 37 Basic Health Centers (outpatient clinics) and one mobile clinic. All medical centers functioning in Ghazni Province employ a total number of 250 physicians and 1 200 other higher or medium level medical staff. In areas where overland transportation is difficult and therefore access to medical services is seriously restricted new medical centers have been established in recent period. Raising the standards of medical services and improving accessibility to health care in all Afghan provinces can solely be credited to international organizations, mainly projects financed by USAID. Sanayee Development Organization and Agency for Assistance and Development of Afghanistan remain the main suppliers of drugs and medical equipment to all health centers in the territory of Ghazni Province. All hospitals and outpatient clinics are bound to submit monthly reports on their activity which form the basis for assessing the number of necessary pharmaceuticals and dressings for the next period. Medical centers are supplied quarterly. The supplies are scarce and irregular, unable to satisfy all the existing needs. Another problem is the validity date of some medications. Both suppliers and medical personnel (who neglect their obligation to submit regular and credible reports) are to blame for such a difficult situation.

Similarly to other regions areas, Ghazni province is also affected by severe shortages of female medical staff, physicians as well as nurses and midwives. This is poses a major obstacle when it comes to implementing mother and child health care or providing advice and information on family planning or contraception.

Another serious health problem in Ghazni Province, as well as in other Afghan provinces, is a considerable number of drug addicts and insufficient number of rehabilitation clinics offering both pharmacological therapy and professional counseling. There are 3 such clinics in Ghazni City. Two of them are financed by an NGO Welfare Association for the Development of Afghanistan and one clinic – Community Based Drug Addicts Treatment Centre – remains under control of the Ministry of Public Health. On the initiative of the American Provincial Reconstruction Team, being part of the ISAF, official meetings with policymakers in the field of health service in Ghazni Province have been organized regularly. The decision makers in this domain are Health Department director and Provincial Hospital director (privately a married couple), who are unofficially known to be the owners of two private medical centers. Unfortunately, none of them is interested

in cooperation with the ISAF. Medical equipment which was delivered to the hospital in Ghazni last year (an X-ray and an ultrasound scanner) are out of service. A qualified X-ray operator has not been employed even though there is an X-ray laboratory and a dark room in the hospital. The ultrasound scanner has also been useless. Appropriate maintenance of hospital equipment is quite foreign to medical personnel in Afghanistan. All broken equipment immediately becomes useless and all procedures are stopped until the hospital receives new equipment. This kind of behavior proves that the health service in Afghanistan is heavily oriented towards international assistance and funding. In general, widespread corruption together with indifference of local authorities to the needs of the local people make it extremely difficult for any civilian or military international organization to organize an aid or a developmental project which could improve the epidemiological situation in Afghanistan.

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