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## Gerontology in Military Medicine

### *Absztrakt/Abstract*

*A gerontológia és a geriátria léte és alkalmazása napjaink fontos követelményévé vált. A téma több szempontból is aktuális! Társadalmunk rohamléptekkel öregszik. A gerontológia az öregedés kutatásával, a geriátria a kóros öregedéssel és az idősök betegségeivel foglalkozó tudományág. Két szakmát határoz meg a beteg életkora: a korábban önállósult gyermekgyógyászatot, majd újabban az idősgyógyászatot a geriátriát. A geriátria a szülészetet és gyermekgyógyászatot kivéve lefedi az egész klinikumot. Ennek ellenére a geriátria mégsem vált önálló klinikummá a gyakorlatban, szubklinikumai – pl. a mindennapokban is oly szükséges „gerontosebészet” – pedig még kevésbé léteznek. Ha megvizsgáljuk a katonák gerontológiai folyamatát, akkor nyugodt szívvel ki lehet jelenteni, hogy a katonai pálya nem nyugdíjas állás. A történelem háborúi a nemzetek fiainak színe-javát irtotta és irtja ki ma is az emberre jellemző, általa kimunkált kegyetlen eszközök, anyagok segítségével. Az állandó fegyverkezési verseny, a fejlesztések, kutatások kényszere rányomja súlyos bélyegét az ebben résztvevő katonára. Ilyen életritmusban, sajátos életkörülmények között csak a katona él. Az állandó stressz, készenlét, kiképzés, a megfelelési kényszer, a gyakorlatok, háborúk, végül, de nem utolsó sorban az idő előtti meghalás fenyegetettsége elsősorban a hivatásos katona életét befolyásolja negatív irányba! A nyugdíjkorhatárt elért tisztek, tiszthelyettesek 70%-a nem éri meg a 70. életévét, 25 %-a meghal 65 éves korára, míg 5%-a él „boldogan” hetven éven túl. 1986. november 10-én nyílt meg az akkori Magyar Néphadsereg Betegotthona, - 2007. július elsejétől a Honvédelmi Minisztérium Állami Egészségügyi Központ Intézeteként (továbbiakban HM ÁEK) – amely a mai napig 120 ágyon igyekszik segíteni ill. gyógyítani a Magyar Honvédség, a rendvédelmi szervek valamint a MÁV geriátriai ellátásra szoruló állományát.*

*Gerontology and geriatrics are exceedingly important nowadays for several reasons, one being that our society is ageing with enormous speed. Gerontology is a science of ageing processes, while geriatrics studies pathological ageing and diseases of elderly people. Patient's age determines two professions: pediatrics that became an independent profession earlier, and healthcare of elderly people, or geriatrics, recently. Geriatrics covers the whole spectrum of clinical medicine, except for obstetrics and pediatrics. Despite of this fact, geriatrics did not gain*

*its independence in clinical care, and its clinical sub-branches, like geronto-surgery, hardly exist at all. If we examine gerontology (ageing process) of military people, the conclusion that military profession does not favor soldiers in regards of reaching their retirement age, is easy to make. Different wars during the history of mankind have depopulated and still are depopulating nations taking away the best of their human resources, using cruel and sophisticated equipment, methods and material. The constant imperative for armament race, developments and research leave their heavy scars on soldiers. Only soldiers live such a life style, only they have such special conditions of life and work. Constant stress, readiness and training, necessity to meet the expectations, exercises, wars and – last but not least – the threat of early death, are all factors negatively influencing the life of active duty personnel. 70% of retirement age officers and non-commissioned officers will not make it to their 70<sup>th</sup> birthday, 25% of them will die before their 65<sup>th</sup> birthday, and only 5% of them will “live happily” after 70.*

*The former Hungarian Armed Forces opened its Home on November 10, 1986. This facility still has 120 hospital beds and as an institution of the MOD National Medical Centre is aiming to help the personnel of the Hungarian Defence Forces, the Police Force and the Hungarian State Railways requiring geriatric care also nowadays.*

***Kulcsszavak/keywords:*** *gerontológia, geriátria, szociális gondoskodás, idősgondozói hálózat ~ gerontology, geriatrics, social care, care network*

## **Introduction**

Gerontology is a discipline dealing with the specialities and the implications of the process of ageing. It is a very young area of medicine; it is only a couple of decades that it has gained ground as an acknowledged field of study.

Geriatrics, which deals with the treatment and care of old patients, has become part of the field of study as a result of the achievements of gerontology.

In the last couple of decades parallel with the development of medicine geriatrics has become an independent specialty for several reasons. In most countries, in Hungary too, substantial part of the population is old, and this tendency is still growing. At the same time the general demand for improved quality of life is continuously increasing, multiplying and diversifying the tasks of doctors and other experts working in both primary care and in hospitals and clinics. The economic aspects of medical care in general and within this the accumulating special tasks of the medical treatment and social care of the aged, also account for the independence of geriatrics.

The pre-requisite for the relatively secure life of the aged population was the strengthening of the middle classes and the growing respect for human life. Industrialisation accounts for the appearance of the class of propertiless labourers, who lived in poverty, who could not save up, and when old, even lost their ground of existence. To solve this situation workers', private and civil

servants' pension funds were established in the 19<sup>th</sup> century. (The founder of these was Bismarck, German councilor in 1887) Both the employers and the state took part in financing the system. This started off a fast but far from accomplished change in the division of labour in medicine which was simply called medical reform. Medical disciplines started to develop or reorganize along different principles: some on the basis of methodology (radiology, surgery) others on basis of organs (ophthalmology), systems of organs (neurology). There are two areas which are determined by the age of the patient. One is pediatrics, which has become independent earlier; the other is geriatrics, the care of old people emerging in our days. While the fact that a child is not a small adult is generally accepted, the fact that an old man is not just a grey haired, adult with wrinkles, but a person of very different character is not widely known. What is common in childhood and old age is that they are both dependent on adults. Consequently the specialty of their medical care is that it should be done by involving the family or supporter. This is the main feature of the care of old people. The older and less healthy a person is the more vulnerable and the more dependent he is on his family or people around him, just like a child. With the exception of obstetrics and pediatrics geriatrics covers the whole spectrum of clinical medicine.

There are more and more old people with chronic illness, who are becoming more and more ill and developing more and more symptoms. Consequently geriatrics has to treat more and more seriously ill patients on every field of clinical specialties.

In the past decades in welfare states there has been an improvement both in the financial and the medical state of the pensioners, the former as a result of the growth of GDP the latter as a result of the development of medicine. Their average age and ratio in the population has increased. Earlier the life of an individual was divided into three stages: first the period preceding the working age, when he is dependent and studying; second the active period, when he is working and supporting others; the third when he is dependent again and supported by others. In welfare states a new stage has been identified between the above second and third period: active old age. People in this period are not part of production any more, nevertheless their financial state is still stable, their activities are not limited by their age or medical state is; they can devote themselves to their hobbies, they travel and study.

It is obvious that as opposed to the welfare states geriatrics in the transforming East-European societies has a very different task to accomplish with opportunities far from being equal. The knowledge and experience which has been the basis of the respect and might of old people all through history has unfortunately lost its value by our age. The reason for this is the immense speed of development which can only be followed by the elderly, if they have special abilities. Nowadays not just the old, but also the middle aged people are

disadvantaged on the labour market. Only the more dynamic, creative intellectuals may keep their advantaged position, but in case of the average employee this change means the ageing of the society.

Some numbers illustrating the demographic and “social-economic” features of the ageing population.

Chart 1.[1]

Year	Population	Over 60	
		(people)	(%)
1960	9.961.044.	1.372.661.	13.7
1990	10.374.823.	1.959.846.	18.8
2003	10.142.362.	2.111.585.	20.8
2004	10.116.742.	2.126.027.	21
2025	9.400.000.	3.008.000.	30.2

The rate of the old (over 60) age group in Hungary between 1960-2025

The growing rate of the aged is caused by the unfavourable changes in the demographic composition of the whole population; the decrease of live birth and the growth of middle age mortality. In Hungary the rate of population over 60 has increased to 22,1% from 13,7% between 1960 and 2010 while the average life expectation of the whole population has increased from 68 to 72,6 years. In 1890 people over 60 were only 5,1% of the whole population. There is also a regional difference in the distribution of the old age population, Heves being the oldest and Szabolcs-Szatmár the youngest county with 21,4% and 17,1% respectively.

### **Epidemiological features**

In Hungary life expectancy of the 60 and 70 year old population has decreased in case of men, but has shown a slight increase in case of women in the last 50 years. There has been a slight decrease again in recent years. Life expectancy is 68,6 years for man and 76,9 for women at present. (In France it is 78 and 84 respectively.)

The leading cause of death in both sexes results from the illness of the circulatory system. This cause represents 50-52% of the mortality in the

population between 65-74 and more than 60% of the mortality in the population over 60 [1].

Among the leading causes of death the second is cancer, the third is chronic hepatopathy and hepatic cirrhosis, the fourth is chronic respiratory disease. The fifth place is taken by violent deaths, the rate of which is over 10 %. The rate of the so called avoidable deaths is high. 30-36% of the 2000-3000 annual terminal suicide is committed in the over 60 age group. The Hungarian old age suicide rate is the worst in international comparison. The causes of this may be the loss of social prestige and status as a result of retirement, (depression, the feeling of becoming useless) the restriction of the most often concerned psychic areas which affect old age e.g. judgment, memory, intellectual performance, temper, orientation..

The aged are disposed to several negative environmental effects, retirement in itself, financial loss, lack of human relationships, decrease of physical and mental performance, insecurity in independence and self assessment, depreciation of others, isolation, illnesses, having to be hospitalized, or having to move into old peoples' home etc. It is even more difficult for the lonely old people: they lose their aim, their daily routine is derailed and they miss physical and spiritual support. In addition, the average pension is just a little higher than the minimum wage.

### **Military Gerontology**

In light of the above there are tasks to be accomplished in the field of geriatrics concerning the Hungarian Armed Forces too. Examining the gerontologic process of soldiers, we can state that military career is in inverse proportion with longevity, due to the fact that mankind has been in constant warfare with itself for several centuries. Since ancient times, well organised armies with the leadership of talented commanders have been slaughtering each other for ethnical and religious reasons or with the aim of conquering territories, always making sure that soldiers should not die in bed with white hair of old age. Wars have exterminated and are still exterminating the best of our human resources with the most cruel devices and materials. This is proved by the military operations going on today. Military profession – because it is a real profession – cannot be compared to anything. It involves all forms of the technical revolution combined with all fields of science. Armies try and apply the latest scientific inventions. The constant arms race and the pressure of research and development exert their very negative effect on the most important factor involved in it, the soldier! Constant stress, readiness, training, pressure to meet the requirements, exercises, wars and last but not least the threat of premature death all negatively affect the lifespan of the professional soldier. 70% of retired officers don't live to be 70, 25 % die before the age of 65, and only 5% live longer than their 70<sup>th</sup> birthday.

The importance of care was already recognised by the military leadership of the 80s. In 1982 the Military Committee of the Hungarian Peoples' Army made a decision that after the dislocation of the Verőce missile unit a social and medical institution should be established on the 17 hectare area.

This was a rational decision partly because of the infrastructure of public utilities of the area and partly because until then there had not been chronic and old age rehabilitation and care in the medical system of the Hungarian Armed Forces.

This is how the Medical Home was built. It was opened on 10<sup>th</sup> November 1986. Now the treatment and care of old people is carried out on 120 beds.

The Verőce Medical Home of MOD NMC receives the entitled and their relatives needing chronic and long term (90-180-day) treatment. The 98 strong staff treats and looks after the patients with great expertise and empathy. To this day they have treated 14350 patients the youngest being 16, the oldest 101. 58% of their patients need comprehensive treatment. There is no doubt that the Medical Home is necessary.

Chart 2.[2]

Year	Degree of bed utilization in %
2005	96,3
2006	95.5
2007	86,5*
2008	91,3
2009	96,7
30.04. 2010.	97,4

(\* Utilization of beds decreased in the period of creating new beds.)

MOD NMC VMH indices of bed utilization between 2005 and 2010.

The ratio of entitled patients on average is 85%. If bed utilization makes it possible the Home receives patients from the region too. Mortality rate is 22%. Patients arriving at the Home are in a very serious condition requiring long treatment or often they are in the final stages of their life. The primary responsibility and task of the Institution is to take perfect care of the patients till the end of their life. This should be done in a way to enable the patient to die with dignity. So far this has been achieved, which earned the home countrywide acknowledgement.

In summary we must state, that the importance of gerontology and geriatrics has substantially increased over the last decades, and by today it has become indispensable. However it is important to emphasize the role of the family, and the cohesive power, active support and participation of the society in this issue.

## References

[1] Magyar Statisztikai Évkönyv, 2009

[2] Verőcei Betegotthon statisztikai adatok 2005-2010.