

## THE CHARACTERISTICS OF THE HEALTH STATE POPULATION IN CENTRAL SERBIA

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Primljen/Received 26. 10. 2016. god.

Prihvaćen /Accepted 25. 11. 2016. god.

**Abstract:** The aim of this study was to analyze the health status of the population in Central Serbia, in order to identify priority health problems. For data source, authors used reports about diseases, conditions and injuries, recorded in services for the health care of preschool children, services for school health, health care services for the adult population and services for the health care of women's health centers in Central Serbia in 2015. On the territory of Central Serbia, leading cause of morbidity in children of preschool and school age are diseases of the respiratory system. Cardiovascular diseases and respiratory diseases dominate in the structure of morbidity in the adult population, as well as high blood pressure as a single disease, while in the female population the most common are diseases of genitourinary tract.

**Key words:** health status, morbidity, Central Serbia.

### INTRODUCTION

Assessment of the health status of the population is socio-medical procedure that allows us to obtain the objective picture of the health status of population using indicators.

More precisely, population health must be considered as the relation with indicators of the mortality, morbidity, disability, anthropometry and the quality of life.

Assessment of health status should be the first stage and a prerequisite for continued systematic and planned work to improve health, as well as the overall health system. Testing and evaluation of population health is not only the foundation of a modern health care planning and health services, but also a prerequisite for the planning and programming of work and development of health services on planning grounds, as well as the health promotion and further development of the health sys-

tem. Today, almost all countries of the world are doing assessments of health, as a prerequisite and basis for the work on the reform of the health system (1).

### AIM

The aim of this article was to analyze the health status of the population in Central Serbia, with the idea of identifying the priority health problems. This will ensure the implementation of the proper measures in addressing these problems.

### METHOD

For data source, authors used the reports about diseases, conditions and injuries of services for the health care of preschool children, services for school health, health care services for the adult population and services for the health care of women's health centers of Central Serbia in 2015. The results are presented in tables.

### RESULTS AND DISCUSSION

The population group of preschool children belongs to the birth time up to 6 years age. The proper attention should be paid in order to protect the health of this population group, not only because of special sensitivity to the effects of different factors, which may endanger their health, but also due to the fact that poor health and unhealthy lifestyles in childhood may result in poor health throughout their lives, which for the company means the health, financial and social consequences (2).

In health care services for preschool children in the territory of Central Serbia were registered in 2015, 138 074 illnesses. Five of the most common groups of diseases are diseases of the respiratory system with

50.5%, followed by the factors influencing health status and contact with health services with 17.2%, diseases of the ear and mastoid process with 5.5% and symptoms, signs and abnormal clinical and laboratory findings to 7.4% (Table 1). The leading diagnoses in a group of diseases of the respiratory system are acute inflammation of the throat and tonsils (43.2%) and upper respiratory tract infections (27.5%). These diseases are a short stream of good forecast and with greater socio-medical significance. Diseases of middle ear and mastoid disease is the most common diagnosis from a group of diseases of the ear and mastoid process with a share of 93.4% (Table2).

Population group of school children and youth belonging to school children aged 7 to 14 years and

school youth (teenagers) from 15 to 19 years. School children and youth indicators of health are considered as the healthiest of all other age groups. However, this period of life is characterized by rapid sexual and psychosocial development as well as the risk for the formation of various risk behaviors, which may endanger the health at given time and/or later in life (3).

The most common causes of morbidity of school children on the territory of Central Serbia, in 2015 were respiratory diseases, accounting for 38.6% of the total morbidity.

The most common diagnosis in this group of diseases was acute inflammation of the throat and tonsils, which makes 42.9% of all diagnoses of diseases of the respiratory system.

**Table 1.** *Leading groups of diseases in health care services for preschool children on the territory of Central Serbia, in 2015.*

GROUP OF DISEASE	Number	%
Respiratory system diseases	69791	50.5
Factors influencing of health status and contact with health service	23724	17.2
Symptoms, signs and abnormal clinical and laboratory findings	10249	7.4
Diseases of the ear and mastoid process	7620	5.5
Other diseases	26690	19.3
Total	138074	100

**Table 2.** *The main diseases in health care services for preschool children in the territory of Central Serbia, in 2015.*

GROUP OF DISEASE	Number	%
Respiratory system diseases	69791	100
1 Acute inflammation of the throat and the tonsils	30134	43.2
2 Upper respiratory tract infections	19174	27.5
3 Acute bronchitis and bronchiolitis	10857	15.6
4 Other diseases	9626	13.7
Factors influencing of health status and contact with health service	23724	100
1 Persons who seeking of health services for examination and testing	11934	50.3
2 Persons in health services for other reasons	8972	37.8
3 Other persons of potentially compromised of health contagious disease	2029	8.6
4 Other diseases	789	3.3
Symptoms, signs and abnormal clinical and laboratory findings	10249	100
1 Other symptoms, signs and laboratory findings	4858	47.4
2 Febrile conditions	4539	44.3
3 Pain in the abdomen and pelvis	801	7.8
Diseases of the ear and mastoid process	7620	100
1 Diseases of middle ear and mastoid disease	7121	93.4
2 Other diseases of middle ear and mastoid disease	493	6.5
3 Other diseases	6	0.07

**Table 3.** *Leading groups of diseases in the services for school health on the territory of Central Serbia, in 2015.*

GROUP OF DISEASE	Number	%
Respiratory system diseases	61228	38.6
Factors influencing of health status and contact with health service	45771	28.9
Symptoms, signs and abnormal clinical and laboratory findings	11163	7.0
Skin and subcutaneous tissue disorders	6355	4.0
Other diseases	34117	21.5
Total	158634	100

**Table 4.** *The main diseases in health care services for school children on the territory of Central Serbia, in 2015.*

GROUP OF DISEASE	Number	%
Respiratory system diseases	61228	100
1 Acute inflammation of the throat and the tonsils	26255	42.9
2 Upper respiratory tract infections	12236	20.0
3 Acute bronchitis and bronchiolitis	6473	10.5
4 Other diseases	16264	26.6
Factors influencing of health status and contact with health service	45771	100
1 Persons who seeking health services for examination and testing	35229	77
2 Persons in health services for other reasons	6929	15.1
3 Other persons of potentially compromised of health contagious disease	3582	7.8
4 Other diseases	31	0.06
Symptoms, signs and abnormal clinical and laboratory findings	11163	100
1 Other symptoms, signs and laboratory results	6446	57.7
2 Febrile conditions	2693	24.1
3 Pain in the abdomen and pelvis	2024	18.4
4 Other diseases	601	10.1
Skin and subcutaneous tissue disorders	6355	100
1 Other diseases of skin and subcutaneous tissue	4499	70.8
2 Infections of skin and subcutaneous tissue	1856	29.2

Upper respiratory tract infections are on the second place among the leading diagnoses of acute bronchitis and bronchiolitis. This acute disease has a short course, a good prognosis without greater social and medical importance. In second place are the factors influencing health status and contact with health services with 28.9% and third in total registered morbidity of this population group - the symptoms, signs and abnormal clinical and laboratory findings with 7%. Disorders of skin and subcutaneous tissues are in fourth place in the overall morbidity of school children (Table 3, Table 4).

Women's health is due to the high sensitivity of this population group and the fact that women take care of their own health but also the health of their children, parents and other family members, certainly of particular

importance. Women's health involves an emotional, social and physical well-being, and is determined by the social, political and economic context in which women live, as well as the biological aspect. Women's health is not just her personal problem but also a problem of respective societies and the international community. Improving the health and quality of life of women has the very positive impact on the entire family (4).

In health care services for women in the territory of Central Serbia in 2015, more than half of the total mortality (60.7%) is a group of diseases of urinary tract. Factors influencing health status and contact with health services are represented with 27.1% of the morbidity of this service. The total morbidity of this service showed that 3.7% of a group had problems concerning - preg-

**Table 5.** Leading groups of diseases in the area of women's health care on the territory of Central Serbia, in 2015.

GROUP OF DISEASE	Number	%
Diseases of the genitourinary system	29981	60.7
Factors influencing of health status and contact with health service	13395	27.1
Tumors	1968	4.0
Pregnancy, childbirth and puerperium	1836	3.7
Othr diseases	2240	4.5
Total	49420	100

**Table 6.** The main diseases in health care services for women on the territory of Central Serbia, in 2015.

GROUP OF DISEASE	Number	%
Diseases of the genitourinary system	29981	100
1 <i>Cervicitis uterii</i>	9363	31.2
2 Other inflammation of female pelvic organs	6204	20.7
3 The menstrual disorders	3325	11.1
4 Other diseases	11000	36.7
Factors influencing of health status and contact with health service	13395	100
1 Persons who seeking of health services for examination and testing	9680	73.3
2 Care and inspection after childbirth	1357	10.1
3 Other diseases	2358	17.6
Tumors	1968	100
1 <i>Leiomioma uteri</i>	671	34.0
2 <i>Neoplasmus benigna ovarii</i>	479	24.3
3 Malignant tumors of connective and soft tissue	214	10.9
4 Other diseases	604	30.7
Pregnancy, childbirth and puerperium	1836	100
1 Other complications of pregnancy and childbirth	578	31.5
2 Complications in confinements and other conditions which complicate pregnancy and childbirth	394	21.5
3 Other diseases	972	53

nancy, childbirth and confinements. The most significant group due to chronic course, the possibilities of secondary prevention and high participation in mortality, make tumors, whose share in the total morbidity services for the health care of the women in Central Serbia with 4.5% (Table 5, Table 6).

In general medicine of health of Central Serbia, in 2015, a total of 459 055 illnesses were recorded. The leading place in the structure of morbidity in the general medicine on the territory of Central Serbia in 2015 occupying diseases of the circulatory system with 19.8%, which, like other chronic, mass, non-communicable diseases to progressively flow often lead to absenteeism, disability and shortening the length of the quality of life.

Leading diagnoses within this group of diseases is essential (primary) arterial hypertension (67%). In second place are the diseases of the respiratory system to the proportion of the total morbidity of 19.4%, which have the higher socio-medical significance, because it is an acute disease with a short course and the possibility of effective treatment. The leading diagnoses in this group of diseases are acute inflammation of the throat and tonsils, acute bronchitis/bronchiolitis and upper respiratory tract infections. Factors' influencing health status and contact with health services are ranked third with a share of 8.8%. Diseases of the musculoskeletal system and connective tissue are represented with 7.9% of morbidity in general medicine services. A group of diseases of urinary tract is in fifth place with a

**Table 7.** The main diseases in health care services for women on the territory of Central Serbia, in 2015.

GROUP OF DISEASE	Number	%
Circulatory system diseases	90798	19.8
Respiratory system diseases	88955	19.4
Factors influencing of health status and contact with health service	40498	8.8
Diseases of the musculoskeletal system and connective tissue	36191	7.9
Diseases of the genitourinary system	33928	7.4
Other diseases	168685	36.7
Total	459055	100

**Table 8.** The main diseases in general medicine on the territory of Central Serbia, in 2015.

GROUP OF DISEASE	Number	%
Circulatory system diseases	90798	100
1 Essential (primary) arterial hypertension	60799	67
2 Disorders of the conduction system of the heart and heart arrhythmias	7471	8.2
3 Other ischemic heart diseases	6467	7.1
4 Other diseases	16061	17.7
Respiratory system diseases	88955	100
1 Acute inflammation of the throat and tonsils	38832	43.7
2 Upper respiratory tract infections	15172	17.1
3 Acute bronchitis and bronchiolitis	13199	14.8
4 Other diseases	21752	24.5
Factors influencing of health status and contact with health services	40498	100
1 Persons who of seeking health services for examination and testing	25209	62.3
2 Other persons of potentially compromised of health contagious disease	8602	21.2
3 Persons in health services for other reasons	5836	14.4
4 Other diseases	851	2.1
Diseases of the musculoskeletal system and connective tissue	36191	100
1 Other diseases of the back	20211	55.9
2 Degenerative diseases of the joints	6218	17.1
3 Inflammation of the joints	2621	7.2
4 Other diseases	7141	19.7
Diseases of the genitourinary system	33928	100
1 Inflammation of the bladder	20343	60
2 Prostatic hyperplasia	4440	13.1
3 Other diseases of urinary system	3211	9.5
4 Other diseases	5934	17.5

share of 7.4%. Within this group inflammation of the bladder with an incidence of 60% is the most common diagnosis in an adult population (Table 7, Table 8).

Similar results were found in our neighborhood countries. In Croatia in 2015, in the structure of morbidity of the adult population were the most common respiratory diseases and diseases of the heart and blood

vessels. For children of preschool and school age usually are diseases of the respiratory system, followed by infectious and parasitic diseases, ear, skin and subcutaneous tissue. The most common reasons why women went to the gynecological clinic and used the services of chosen gynecologist within primary health care of women in Croatia in 2015 were diseases of the urinary

and sexual organs, pregnancy, childbirth and confinement, followed by tumors, infectious and parasitic diseases (5).

## CONCLUSION

On the territory of Central Serbia, one leading cause of illness in children of preschool and school age are diseases of the respiratory system. In the structure of morbidity in the adult population are dominated cardiovascular diseases and respiratory diseases, while the high blood pressure is taken as a single disease.

Among females, the most common diseases are diseases of genitourinary tract. Intensifying promotio-

nal and preventive measures and activities, as well as educating the population of risk factors and diseases prevention is certainly the priority, in order to achieve improvement and preservation of health of the population in Central Serbia.

## CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

## Source of Funding

There were no external funding source for this study.

## Sažetak

# KARAKTERISTIKE ZDRAVSTVENOG STANJA STANOVNIŠTVA CENTRALNE SRBIJE

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Cilj rada je analiza zdravstvenog stanja stanovništva u Centralnoj Srbiji radi identifikacije prioriternih zdravstvenih problema. Kao izvor podataka korišćeni su Izveštaji o oboljenjima, stanjima i povredama - službi za zdravstvenu zaštitu predškolske dece, službi za zdravstvenu zaštitu školske dece, službi za zdravstvenu zaštitu odraslog stanovništva, službi za zdravstvenu zaštitu radno aktivnog stanovništva i službi za zdravstvenu zaštitu žena Domova zdravlja Centralne Srbije

za 2015. godinu. Na teritoriji centralne Srbije vodeći uzrok oboljevanja kod dece predškolskog i školskog uzrasta su bolesti sistema za disanje. U strukturi morbiditeta kod odraslog stanovništva dominiraju bolesti sistema krvotoka i bolesti sistema za disanje, dok su u populaciji žena najzastupljenije bolesti mokraćno-polnog sistema.

**Ključne reči:** zdravstveno stanje, morbiditet, centralna Srbija.

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