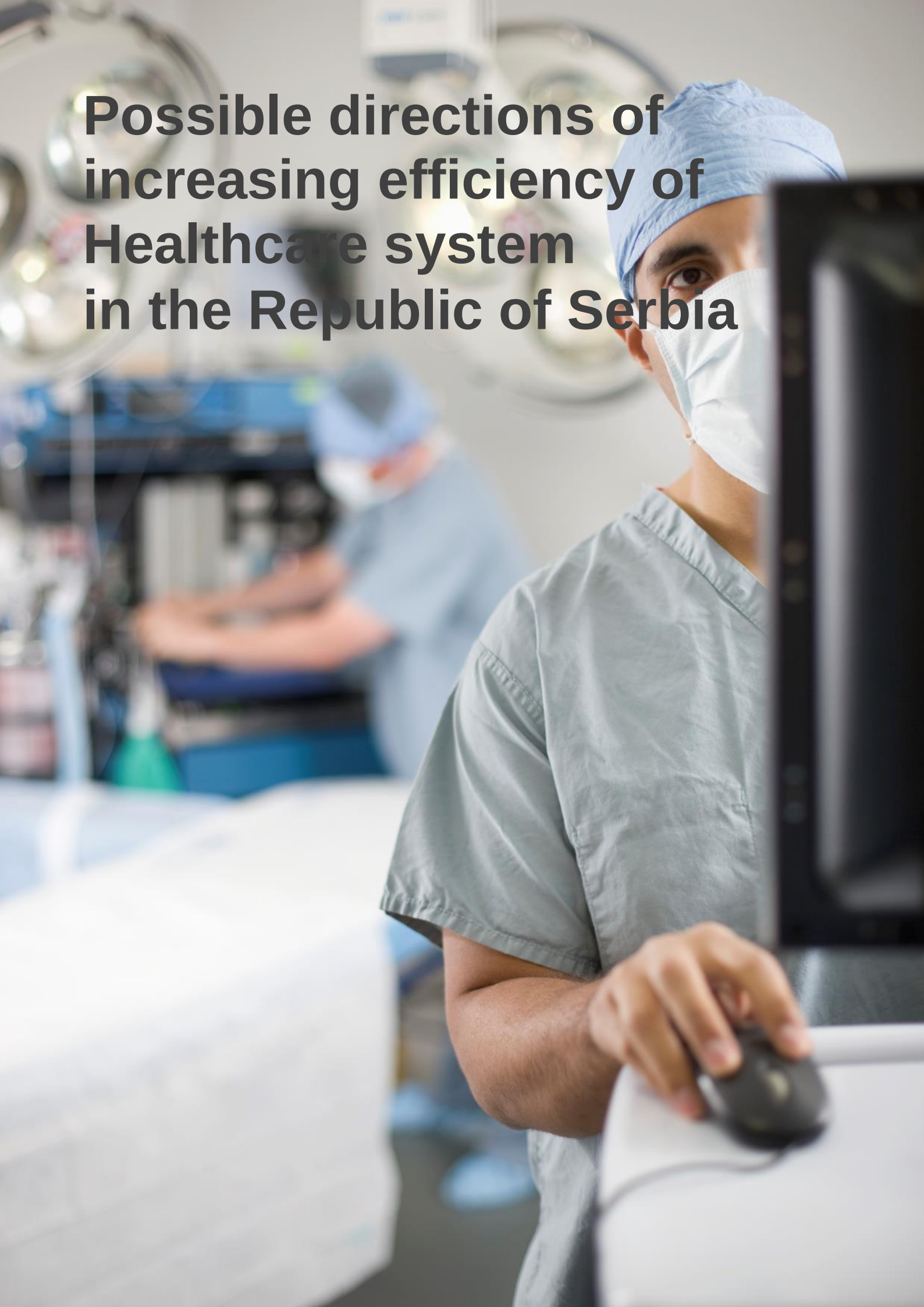
Possible directions of increasing efficiency of Healthcare system in the Republic of Serbia



Contents

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Abbreviations

BIS – Business Information System
CEE – Central and Eastern Europe
CHIF – Croatian Health Insurance Fund
DRG – Diagnosis Related Groups
EBIT – Earnings Before Interest and Taxes
EBITDA – Earnings Before Interest, Taxes, Depreciation and Amortization
EHCI – Euro Health Consumer Index
EKG – Echo Cardiogram
HC – Healthcare
EHR – Electronic Health Record
EU – European Union
EUR – Euro
FYR Macedonia – Former Yugoslav Republic of Macedonia
GDP – Gross Domestic Product
HCIs – Healthcare Institutions
HDI – Human Development Index
HPM – Hospital Purchasing Mechanism
IHIS – Integrated Healthcare Information System
ILO – International Labor Organization
IMF – International Monetary Fund
JPY – Japanese Yen
KPI – Key Performance Indicators
MDC – Major Diagnostic Categories
MoH – Ministry of Health
MHI – Mandatory Health Insurance
MSI – Mandatory Social Insurance
MSIF – Military Social Insurance Fund
NBS – National Bank of Serbia
OECD – Organization for Economic Cooperation and Development
OMSI – Organizations for Mandatory Social Insurance
OTC – Over The Counter
PAPA – Papanicolaou Stain
PDIF – Pension and Disability Insurance Fund
PPP – Purchasing Power Parity
PPP(s) – Public Private Partnership(s)
PPS – Purchasing Power Standard
RHIF – Republic Health Insurance Fund
RS – Republic of Serbia
RSD – Republic of Serbia Dinar
SMART - Specific Measurable Achievable Relevant and Time Bounded
SME – Small and Medium Enterprises
USA – United States of America
USD – United States Dollar
UNDP – United Nations Development Program
UNOPS - United Nations Office for Project Services
VAT – Value Added Tax
VHI – Voluntary Health Insurance
WHO – World Health Organization

I Executive Summary

1.1 Purpose and main objectives of the Document

This Document is prepared to provide insight into the current situation of the healthcare system, compare healthcare system in the Republic of Serbia with best practices in the World, and give recommendations for improving efficiency of healthcare system in Republic of Serbia. The goal of this Document is to give directions and steps to make the healthcare system in the Republic of Serbia sustainable.

Provided recommendations will be focused on enabling continuous monitoring and controlling of revenues and expenses of public healthcare institutions, based on the assessment of comparison of efficiency between public and private healthcare institutions.

The scope of the study consists of the following:

Macro Healthcare Study

Topics covered by the Macro part of this Document are: general overview of the Serbian healthcare system, analysis of cash flows in public healthcare system, estimation of out of pocket costs, efficiency analysis of provision health services, relationships between all stakeholders in the system and comparison of their share, contribution and the possible role of the private sector, the possibility of public-private partnerships, screening of RHIF (Republic Health Insurance Fund) revenues and expenses. Macro analysis includes:

- Overview of the current macroeconomic environment and health spending indicators in Serbia;
- Overview of financing of the Serbian healthcare system together with the analysis of releationships between all relevant participants in the System;
- Description of main intermediary institutions involved in financing the Serbian healthcare system;
- Estimation of sustainability of public healthcare system expenditures;
- Current financial reporting and financial controlling framework;
- Estimation of out of pocket costs;
- Comparison of Serbian healthcare system with World's Best Practices
- Voluntary Health Insurance market structure and overview
- Overview of information technology that is in use in Serbian HCIs

Micro Healthcare Study

Micro analysis is prepared with the intention to show the as is state in Serbian healthcare system according to different types of institutions and with the purporse of comparing direct costs per several selected types of services on primary and secondary/tertiary level of care between private and public healthcare institutions.

Character of the analysis is mainly financial, but also includes qualitative aspects of the healthcare system, observed through selected services.

We have conducted a detailed research on a representative sample of seven selected public and private institutions in primary, secondary and tertiary sector. In each of these three sectors, we have observed specific services provided in order to make a general comparison of activity based costs and general cost of services between public and private sector.

We have also done analysis of main incomes and expenses per institution, again for the purpose of comparing incomes and outflows in private and public sector.

Recommendations for increasing efficiency of the overall healthcare system in Serbia

Recommendations have the intention to provide insight in some possible future steps for the development of the Serbian healthcare system in order to increase its efficiency and achieve and retain financial sustainability in the long run. This part also contains an evaluation of possible private sector contribution to the National healthcare system and an assessment of possible increase of activity of private health sector and a greater role in the national healthcare system. Final aim is to ensure:

- Long term financially sustainable healthcare system
- Improve efficiency and quality of the overall healthcare system
- Ensure contionuos and equally accessible healthcare

Research Methods and Sources

Main sources of information used in this Study were interviews conducted with employees in institutions that have a big role in Serbian healthcare system financing such as the Republic Health Insurance Fund, Ministry of Health and Ministry of Finance. We have also conducted fieldwork in the selected institutions on primary and secondary/tertiary level of care (three public and four private healthcare institutions). Our professional research and data analysis also contributed greatly in writing this Document. Private healthcare institutions that have provided us the opportunity to work within their facilities are members of Association of private healthcare institutions an private practices in Serbia, and the Association itself has also contributed significantly to our work by providing us some of the necessary data. Public healthcare institutions that were part of the research have been selected based on the agreements made with the Ministry of Health of the Republic of Serbia, while other state institutions including Ministry of Health, Ministry of Finance and Republic Health Insurance Fund also provided us with a set of data necessary for drafting this document.

Our professional research and data analysis also provided a great part for drafting this document. For the purpose of writing this Document, we have also used data from World Bank's report: "Serbian public finance review" 2015, World Bank's study "How to do more with less" published in 2009, "Analysis of Health Care Expenditure Movement", published in 2015 by Public Health Institute of Serbia Dr. Milan Jovanovic Batut, data publicly available on the website of the Ministry of Finance, National Bank of Serbia, Statistical Office of the Republic of Serbia, World Health Organization data, Ipsos Strategic Marketing Healthcare spending research, and other publicly available data.

1.2 Key findings and recommendations

Most healthcare reforms in various economies are geared to accomplish three major goals:

- Expand access to more people and provide affordable health insurance to those without coverage
- Improve the quality of healthcare delivery
- Control rising healthcare costs while balancing government health expenditures

By achieving these three strategic goals, the industry can meet its challenges collectively. Healthcare organizations are employing a number of strategies to overcome challenges such as:

- Improving productivity
- Managing rising healthcare costs and ensuring financial sustainability
- Empowering consumers and meeting unmet healthcare needs
- Consolidating through mergers and acquisitions or private –public partnerships and economies of scale
- Increasing supply chain efficiency
- Managing regulatory challenges
- Leveraging the Internet and IT strategies and building a digital backbone in healthcare

During our research we have identified several key issues in overall Serbian healthcare and given recommendations for improvement based on experience, expert judgment and comparison with World's best practices.

Main issues identified

- Serbian HC System is not financially sustainable in the long run.
  - There is an obvious trend of over spending in relative terms, but insufficient spending in absolute terms;
  - There are great inefficiencies in the use of assets and inventories. Auditing of public procurement processes is very poor, and there is a lack of control in the system;
  - Controlling functions are not being established, at least not to the size and the extent that is necessary for the system to achieve and maintain its sustainability; Poor financial management especially in public HCIs;
  - Planning and budgeting of Serbian HC expenditures is not aligned with Budget calendar and Fiscal Strategy;
  - Collection of health insurance contributions is inefficient which significantly jeopardizes the sustainability of the System;
  - Cost efficiency, patient opportunities and the value felt as well as effectiveness in terms of health gains are not on a satisfactory level;
  - Donations are being monitored only in terms of value and there is a very low level of monitoring of the type of donated equipment, items received and their utilization;

- Inclusion of private sector is very low and possible benefits from greater involvement of private healthcare providers are not being used. The system does not have enough mechanisms for monitoring this type of institutions or for their inclusion in the future. Private healthcare sector in Serbia is still not at the satisfactory level of development, since the majority of services, especially on the secondary and tertiary level of care, are still dominantly being provided in the public sector.
- There is no option of co/financing healthcare services that have been outsourced to private sector by patients
- Public hospital sector is relatively strong, but the need for modernization is significant. There are long waiting lists for certain procedures and possibilities of private sector helping with this issue are not being used as well. The access to healthcare is not regulated enough and the integration of the different levels of treatment is inexistent. The system needs to evolve into a more effective one, where the patient is in central focus.
- Low level of preventive compared to curative services has a diverse effect on financial sustainability of the system.
- Low level of reimbursement for new innovative medicines comparing to other EU countries.
- Flow of information about patients throughout the system is poor. Public healthcare institutions almost do not cooperate at all, and data sharing is on an unsatisfactory level. Complete inexistence of cooperation and information sharing between private and public institutions.
- Low implementation and use of information and communication technologies in all HCIs, but especially in the public sector.
- Uneven quality of service provided between private and public healthcare providers.

Recommendations

The intention of the Recommendations part of this Document is to provide insight in some possible future steps for the development of the Serbian healthcare system in order to increase its efficiency, achieve and retain financial sustainability, improve efficiency and quality of service provided and ensure continuous and equally accessible healthcare to all participants in the System.

Recommendations are directed at improving financial sustainability of the overall healthcare System by applying a model of Hospitall Purchasing Mechanism (HPM) based on the contracts with units responsible for delivering healthcare. Besides HPM we recommend implementation of uniform financial reporting frameworks, SMART goal setting, establishment of key performance indicators and risk management strategies which are also aimed at improving financial stability of the System.

Also, stronger involvement of private healthcare providers and posible partnerships between RHIF are being recognized as a way of significant reduction of expenditures for healthcare in absolute terms.

One of the recommendations is to develop a model of co-payments in which patients that are interested for this way of obtaining health services, cover the difference in price between price in private HCIs and the amount of RHIF coverage.

Serbian healthcare system focus should be shifted from curative to preventive medicine. Patients should have the option to have a chosen general practitioner from private HCIs as

well. Building up the quality of primary and preventive care through better screening and, for example, treatment of chronic diseases, and promotion of a healthier lifestyle reduces healthcare costs in the mid-to long term.

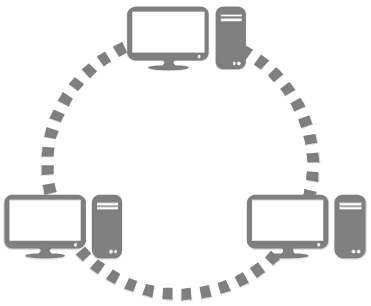
Procedures for registration and reimbursement of new innovative medicines on the market should be simplified, as this type of therapy can significantly reduce other healthcare costs both in the short and in the long run.

Development of an integrated information system for all HCIs involved in providing healthcare to people (public and private), especially for those executing procedures on waiting lists in order to provide real time information sharing and optimal solutions for the patient is crucial. We also recommend a development of a software solution that can help organizations maintain up-to-date patient records and privacy of data, improvement of work technology, reduction of bureaucratic arbitrariness and unnecessary transportation costs and „paper-less“ technology in the future.

Centralizing healthcare on a State level is recommended as a better option for Serbia at the current state of development because of coordination problems and risk of duplication of services and therefore expenses that are major arguments against a decentralized healthcare system.

Since we have recognized that the health insurance market shows a remarkable growth potential and could significantly support financial sustainability of healthcare system in Serbia we have tried to explain possible directions for future development of Serbian VHI Market through case-study based models of voluntary health insurance in several European countries - Croatia, Hungary, Czech Republic, Estonia and Slovakia.

MACRO HEALTHCARE STUDY



II Macroeconomic and Health Spending indicators in Serbia

2.1 Macroeconomic environment

Key chapter points: ***Analysis of macroeconomic environment has shown that GDP per capita in PPP terms is still very low in comparison with EU28 countries and in 2013 achieved only 37% of EU28 average. Healthcare sector contributed to Serbian GDP with 4,9% in 2013. GDP structure is similar to those of developed deindustrialized European countries (EU15), but it is undesirable for Serbia's stage of development which demands high manufacturing industry growth and growth of exports.***

Until escalation of economic crisis in 2008, Serbian GDP grew steadily, at an average annual rate of 5.9%.[1] However, after the beginning of crisis, there were significant declines and recoveries of GDP, which totaled 33.2 billion EUR in 2014. GDP per capita in PPS terms is still very low in comparison with EU28 countries and in 2013. achieved only 37% of EU28 average. For example, GDP per capita in the same year in Hungary was 66% of EU28 average, in Croatia 61%, in Romania 55% and in Bulgaria 45%[2]. Lower GDP per capita had only FYR Macedonia (36%), Bosnia & Herzegovina (29%) and Albania (28%).

Serbia significantly reduced its inflation rate, from 40.1% in 2001. to 1.7% in 2014. Unemployment rate in 2014. was 16.8% (ILO definition) and still is one of the highest in Europe (only Greece, Spain, Bosnia & Herzegovina and FYR Macedonia had a higher unemployment rate than Serbia). One of the main problems is a relatively low level of export (in 2014. export of goods and services was 43.5% of GDP), which causes high trade and current account deficit, and on that basis relatively high foreign debt (near 80% of GDP in 2014) and rapidly growing public debt (over 70% of GDP in 2014).

Table 1: Macroeconomic indicators in Serbia

Indicator	2009	2010	2011	2012	2013	2014	Trend
GDP (mill. USD)	42.685,8	39.366,5	46.462,5	40.675,3	45.514,9	43.801,3	↗
GDP, real grow th in %	-3,1	0,6	1,4	-1,0	2,6	-2,0	↗
GDP per capita (USD)	5.830,7	5.399,1	6.422,8	5.650,1	6.353,7	6.152,8	↗
Consumer prices grow th, end of period (%)	6,6	10,3	7,0	12,2	2,2	1,7	↘
Exports of goods and services (mill. USD)	11.196,5	12.591,6	15.495,1	14.761,3	18.548,5	19.140,1	↗
Exports of goods and services (% of GDP)	26,2	32,0	33,4	36,3	40,8	43,5	↗
Current account deficit (mill. USD)	-2.659,6	-2.495,6	-3.989,6	-4.078,7	-2.106,8	/	↘
Current account deficit (% of GDP)	-6,2	-6,3	-8,6	-10,0	-4,6	/	↘
Unemployment rate, ILO definition	16,1	19,2	23,0	23,9	22,1	16,8	↘
External debt (mill USD)	31.013,6	31.090,7	33.534,0	32.923,9	34.224,9	34.487,9	↗
External debt / GDP	72,7	79,0	72,2	80,9	75,2	78,3	↗
Public debt (mill. USD)	13.717,5	16.077,8	20.557,9	22.745,4	26.755,7	30.157,6	↗
Public debt / GDP	32,8	41,8	45,4	56,2	59,6	70,9	↗

Source: publicly available databases of National Bank of Serbia (http://www.nbs.rs/internet/english/80/index.html) and Ministry of Finance (http://www.mfin.gov.rs/pages/article.php?id=9814)

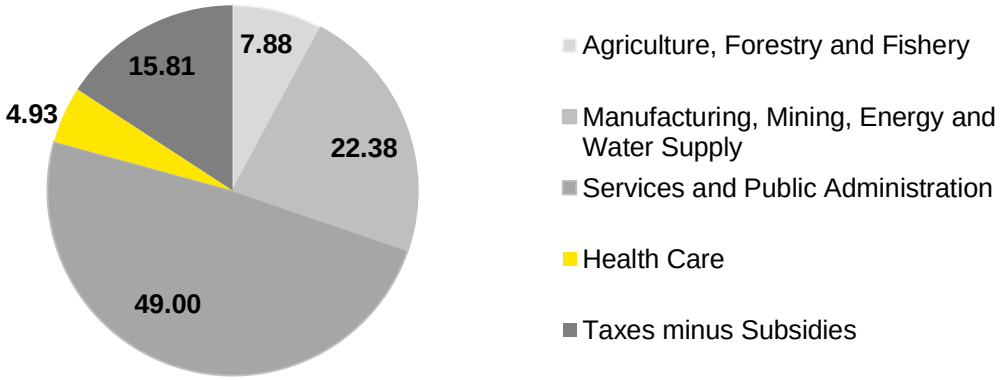
[1] Calculated on the basis of publicly available database of Ministry of Finance: http://www.mfin.gov.rs/pages/article.php?id=9814

[2] Eurostat: http://ec.europa.eu/eurostat/documents/2995521/6216033/2-11122014-AP-EN.pdf/2d6e4635-8dfd-4950-8ce6-27c421ad25d1

Structure of Serbian GDP after 12 years of transition is still inadequate (Picture 1). Share of Manufacturing Industry with Mining, Energy and Water Supply in 2013. was about 22.4% and among the lowest in transition countries. Share of agriculture, forestry and fishery was about 7.9% which means that tradable sectors contributed to GDP with only 30.3%. On the other hand, share of services was 55.4% (healthcare 4.9% and other services with public administration 49.0%). This structure is similar to those of developed deindustrialized European countries (EU15), but it is undesirable for Serbia's stage of development which demands high manufacturing industry growth and growth of exports.

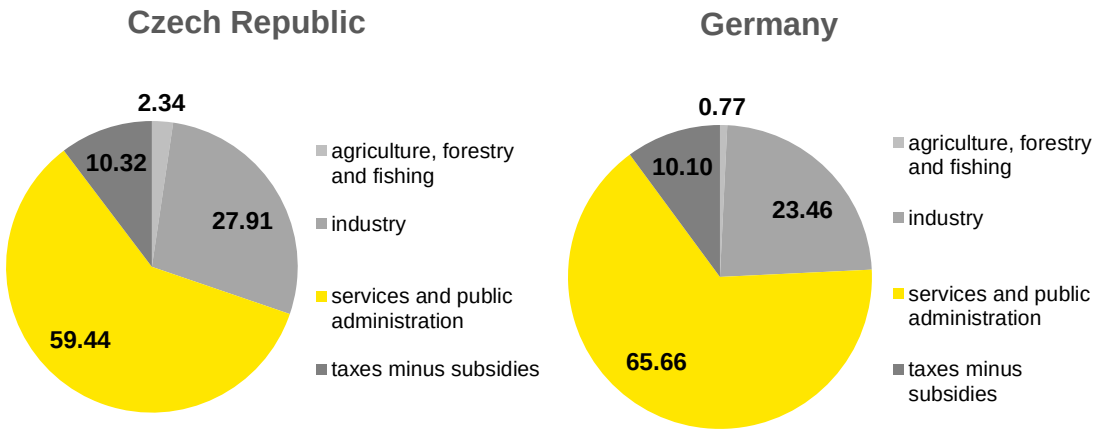
As we can see on the example of Germany (Picture 2), in highly developed European countries that are also largely deindustrialized, industry contributes significantly to GDP. Share of industry in German GDP in 2013. was 1.1 p.p. greater than in Serbia. In Czech Republic, one of the most developed countries in transition, this share was even higher – 27.9% or 5.5 p.p. greater than in Serbia. We can see that industry contribution to GDP, together with the contribution of exports, is of considerable importance for economic growth and development of transition countries.

Picture 1: Structure of Serbian GDP in 2013 (in %)



Source: Statistical Office of the Republic of Serbia, http://webrzs.stat.gov.rs/WebSite/repository/documents/00/01/54/06/06-NATIONAL_ACCOUNTS.pdf

Picture 2: Structure of GDP in 2013 in selected countries (in %)



Source: Federal Statistical Office of Germany, https://www.destatis.de/ and Czech Statistical Office, https://www.czso.cz/csu/czso/home/

According to UNDP data, Serbia's value of human development index for 2013. is 0.745 — which is in the high human development category—positioning the country at 77 out of 187 countries and territories. This index includes three basic dimensions of human development represented by the values of life expectancy at birth, average years of adults' education and national income per capita.

Between 1990. and 2013, Serbia's HDI value increased from 0.726 to 0.745 which represents an increase of 2.6 percent or an average annual increase of about 0.11 percent. This rank is shared with Jordan. From Europe and Central Asia, countries which are close to Serbia in 2013. HDI rank and to some extent in population size are Croatia and Belarus.

Table 2: Serbia's HDI trends based on consistent time series data and new goalposts

Year	Life expectancy at birth	Expected years of schooling	Mean years of schooling	GNI per capita (2011 PPP$)	HDI value
1990.	71.5	13.6	8.0	14,264	0.726
1995.	71.8	13.6	8.7	6,151	0.692
2000.	72.1	13.6	9.2	7,820	0.713
2005.	72.8	13.6	9.4	10,122	0.732
2010.	73.7	13.6	9.5	11,287	0.743
2011.	73.8	13.6	9.5	11,445	0.744
2012.	73.9	13.6	9.5	11,030	0.743
2013.	74.1	13.6	9.5	11,301	0.745

Source: http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/SRB.pdf

2.2 Serbian Health Profile

Key chapter points: ***Serbia's epidemiological profile closely resembles that of other Central and Eastern European states and developed markets, with non-communicable diseases being the primary causes of mortality and morbidity. Serbia's pharmaceutical expenditure per capita (USD146) is currently one of the lowest in the CEE region and well below the regional average of USD231. Pharmaceutical companies that have contracts with RHIF are obliged to continuously provide medicines and other medical supplies to all HCIs in the Network Plan, upon public procurement procedures and centralized public procurement that is conducted by RHIF in the name and for the account of HCIs in the Network Plan. There is an increasing trend of unsettled liabilities of healthcare institutions that are part of the Network Plan, so there is a significant concern that some of the institutions will not be able to finance their liabilities in the following period.***

2.2.1 Basic indicators and top causes of death

General indicators of Serbian health profile with basic data about condition of the national health system are shown in the table below.

Table 3: Basic indicators:

Indicators (2013)	Statistics
Population (thousands)	7114
Population aged under 15 (%)	16
Population aged over 60 (%)	21
Median age (year)	42.6
Population living in urban areas (%)	55
Total fertility rate (per woman)	1,4
Number of live births (thousands)	66.5
Number of deaths (thousands)	101.3
Birth registration coverage (%) – 2010	99
Cause-of-death registration coverage (%) - 2012	90
Gross national income per capita (PPP int $)	12020
WHO Region	European
World Bank Income classification	Upper middle

Source: World Health Organization: http://www.who.int/gho/countries/srb.pdf?ua=1
And Republic Statistical Office: http://webrzs.stat.gov.rs/WebSite/Public/PageView.aspx?pKey=2

According to WHO research, number one cause of death in Serbia are heart diseases, while cancers are on the second place. In the Table 4 are shown top 10 causes of death in Serbia, according to WHO, and we can see that almost all of them are some kind of heart or cancerous diseases.

Table 4: Top 10 causes of death in Serbia

Rank	Disease	%of deaths	Number of deaths (in 000 s)	Change trend
1	Stroke	14,3%	16,2	
2	Cardiomyopathy, myocarditis	13,9%	15,7	
3	Ischaemic heart disease	13,6%	15,4	
4	Trachea, bronchus, lung	5,6%	6,4	
5	Hypertensive heart disease	4,0%	4,5	
6	Diabetes mellitus	3,4%	3,9	
7	Colon and rectum cancers	2,9%	3,3	
8	Chronic obstructive pulmonary disease	2,5%	2,8	
9	Kidney diseases	2,1%	2,4	
10	Breast cancer	1,9%	2,2	

Source: World Health Organization: http://www.who.int/gho/countries/srb.pdf?ua=1

Serbia's epidemiological profile closely resembles that of other Central and Eastern European states and developed markets, with non-communicable diseases being the primary causes of mortality and morbidity. By 2012. the percentage of population aged 65 and above had gone up from 10 to 14 percent, and it is projected to reach 25% by 2050. Due to it's aging population, non-communicable diseases (NCDs), namely diabetes, cardiovascular diseases, cancer, asthma and neurological conditions, account for the majority of Serbia's current disease burden. Overall the three risk factors that account for the most disease burden in Serbia are poor diets, high blood pressure and tobacco consumption.

Life expectancy at birth in Serbia in 2013. was close to 75 years in average, for both males and females. Women have better life expectancies at birth, than man for over five years. (77,68 years vs 72,46 for men). Life expectancy at birth increased by 3 years in the period between 2000. and 2013, and is one year below WHO Region, but higher than in same World Bank income group countries. This increase is mostly due to making significant progress in treating cardiovascular diseases.

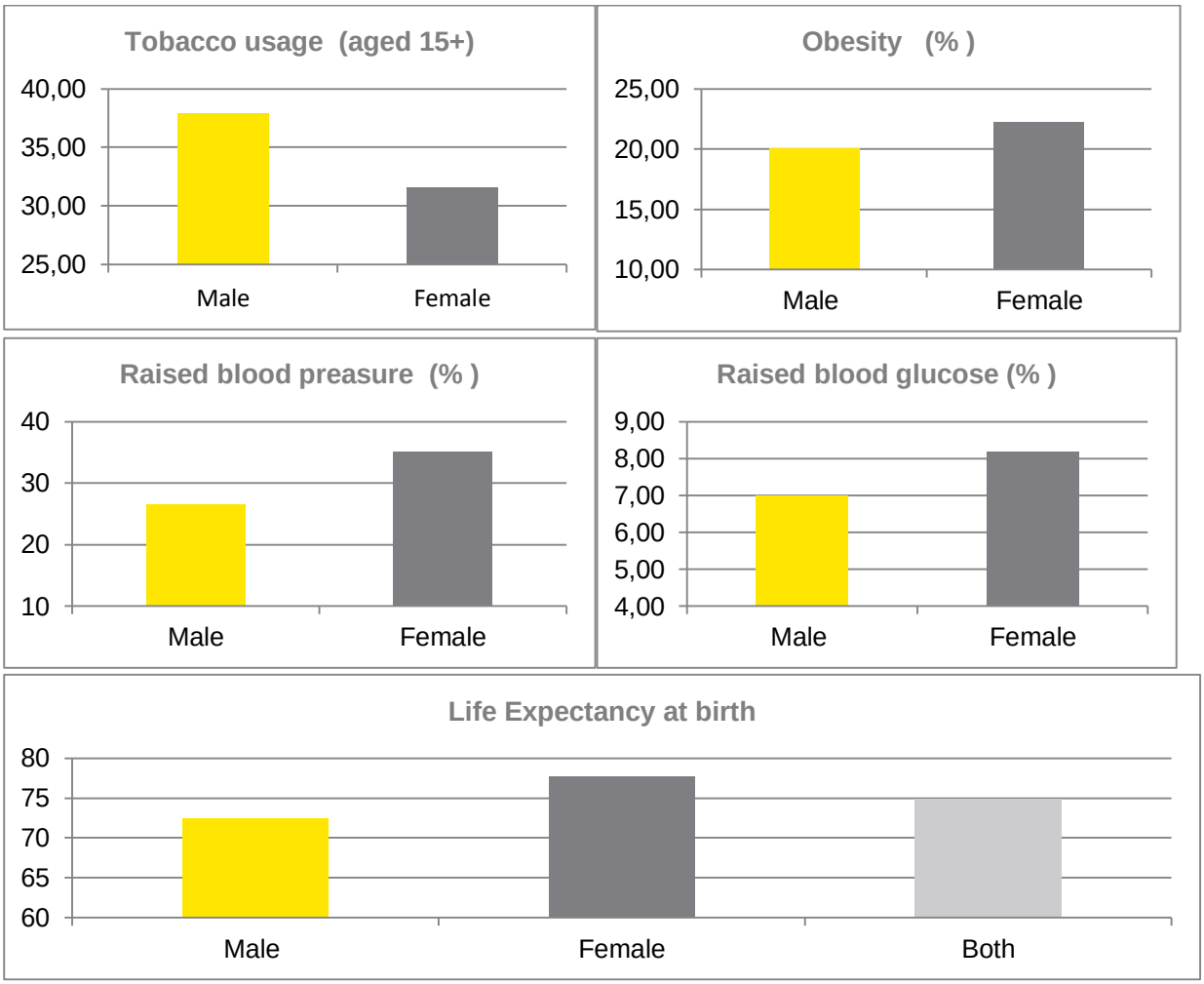
Total expenditures on health per capita in USD at an average exchange rate were several times lower than in Europe during the last 20 years.

Adult risk factors such as raised blood glucose, obesity, tobacco usage and raised blood pressure are somewhat higher in Serbia, than the Europe average, but indicators that show utilization of health services are on a satisfying level when compared to EU average.

The prevalence of hypertension has been rising since 2000. The incidence of daily smoking among adults is 35,8% in 2013. compared to average 19% in EU countries and 22% in Western Balkan countries.

Despite relatively high insurance coverage, poorest segments of population still have difficulties accessing healthcare services. The proportion of households reporting unmet medical care need due to financial reasons is nine times higher than in EU. According to SILC survey, over 80% of respondents declared having a valid health insurance card, but more than 10% of the poorest had forgone a visit to a doctor or a dentist that they needed.

Picture 3: Adult risk factors in Serbia in 2013.



Source: http://www.batut.org.rs/download/publikacije/2013OdabraniPokazatelji.pdf

Table 5: Prevalence of adult risk factors in 2014.

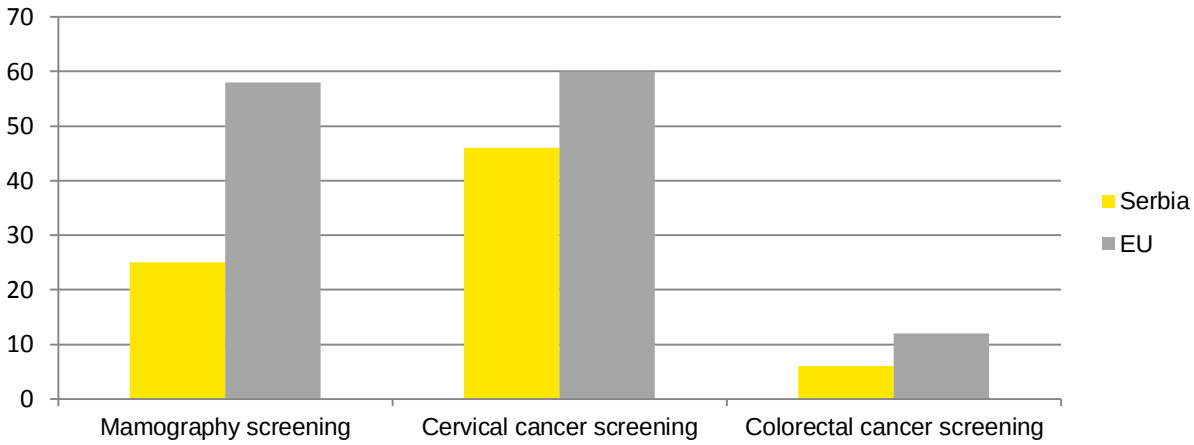
Adult risk factor	Year/Period	Serbia		WHO	
		Male	Female	Male	Female
Prevalence of raised fasting blood glucose among adults aged ≥ 18 years (%)	2014	8,5	7,1	9	7,6
Prevalence of raised blood pressure among adults aged ≥ 18 years (%)	2014	33,2	24,9	27,1	19,7
Adults aged ≥18 years who are obese (%)	2014	18,6	20,5	21,5	24,5
Prevalence of current tobacco use among adolescents aged 13–15 years (%)	2007-2014	18,2	17,4	N/A	N/A
Contraceptive prevalence (%)	2007-2013	61		68	
Antenatal care coverage 4+ visits (%)	2007-2014	94		N/A	
Births attended by skilled health personnel (%)	2007-2014	98		98	
Immunization coverage among 1-year-olds (%) Measles	2013	92		95	

Source: http://apps.who.int/iris/bitstream/10665/170250/1/9789240694439_eng.pdf?ua=1&ua=1

According to observations made by World Bank in Serbia, there is a considerable variation in primary care performance and efficiency. Though outpatient contact rates are relatively high, this is not always the case with preventive and primary care services

Serbia has higher outpatient contacts per capita than the EU, but there are gaps in the coverage and quality of primary care and preventive services. Though decreasing, outpatient contacts per year are higher than the EU average. Despite more frequent contacts with doctors, favourable outcomes for most of the NCDs is worse than the EU average. While the number of preventive examinations has increased during the last decade, number of preventive screenings for breast cancer, cervical cancer and colorectal cancer are still below the EU average.

Picture 4: Preventive screening rates in Serbia and EU



Source: World Bank – Serbia Public Finance Review, 2015

Diagnosis and treatment of hypertension is improving but, not yet enough. While nearly half of adults have hypertension or are at risk, only one third of all adults have been diagnosed. About 10% of diagnosed cases in 2013. remained untreated.

Most of the government health budget is directed to hospitals, although the share of total health spending allocated to hospitals is decreasing, this is happening at a slow pace. Curative and rehabilitative services account for a little less than one half of total health expenditures (4,5% of GDP).

In the hospital sector, bed capacity and admission rates are relatively high and there is place for improvement of acute inpatient care efficiency.The density of hospitals is aligned with the regional average in the Western Balkans, but the number of beds per 100.000 inhabitants is much higher. Inpatient admissions are also much higher than the regional average. Finally, while bed density is high, the occupancy rate has dropped from 80-85% in 2005/06 to 65% in 2011.

In the end coverage of medical staff is within regional norms, but the share of non-medical staff is not. Non-medical staff represents 25-30% of the health workforce, which is twice as

high as in the OECD countries. The share of non-medical staff is particularly high in hospitals (42%).[3]

Issues identified: Low level of preventive compared to curative services and high level of non-medical staff especially in hospitals have a diverse effect on financial sustainability of the system.

Recommendation: The best performing OECD countries have achieved good health outcomes with lower bed capacity and admission rates through reforms to reinforce primary and preventive care and rationalize provision of acute and long-term care services. Number of non-medical workers needs to be reduced.

****For more detailes see RECOMMENDATIONS part of this Document.*

2.2.2 Serbian pharmaceutical and medical device markets

Even though Serbian pharmaceutical market is one of larger markets in the Central and Eastern European (CEE) region, Serbia's overall pharmaceutical market is relatively underdeveloped, seeing regular medicine shortages and somewhat long waiting times for patients. In 2014, calculated pharmaceutical sales were worth RSD 92.43bn (USD 1.05bn). However, Serbia's pharmaceutical expenditure per capita (USD 146) is currently one of the lowest in the CEE region and well below the regional average of USD 231, highlighting the chronic underspending on pharmaceuticals in the country. Pharmaceutical sales in 2014. were worth 2.54% of GDP and almost 23.17% of total health expenditure.

According to World Bank research[4], spending on pharmaceuticals represented about 25% of total public health spending in 2013. The share of total pharmaceutical spending (public and private) in total health spending is significantly higher in Serbia (31%) than the regional average (18,4% in Western Balkans) or the EU average (20,4%) Moreover, the pharmaceuticals share increased between 2005. and 2011. when it was decreasing in both the region and the EU. Total spending on pharmaceuticals also went up as a percentage of GDP (from 2% in 2005. to 3,3% in 2013), while in the region and the EU it held steady at about 1,8%. Most of the spending on pharmaceuticals is driven by private expenditures. Such high out-of-pocket payments on drugs indicate gaps and inefficiencies in public sector provision.[5]

Serbia's pharmaceutical market is dominated by prescription drug sales, which account for 89.70% of the total value of the market, primarily generic medicines, which in turn constitute 69.00% of prescription drug sales and 61.90% of the total value of the market. The average annual number of prescription drugs per insured person in Serbia was 12 to 14 in the period between 2001–2013. according to RHIF data, which is about twice the average in EU

[3] Source: World Bank – Serbian Public Finance Review, 2015

[4] We hereby mention that, even though World Bank's Report has been used as a relevant source in this part of the Document, according to some other sources, data in World Bank's Report significantly differ from Serbian publicly available data. For example, according to official data from the Ministry of Finance (www.mfin.gov.rs), Serbian GDP for 2013 was 3876,4 billion RSD, while according to consolidated financial report of the RHIF (www.rfzo.rs), consolidated revenues of the RHIF for the same year are 225,86 billion RSD which is 5,82% of the GDP, significantly less than 6,4% GDP as stated in the Report. Also, according to RHIF financial plan for year 2013 (rfzo.rs), total spending on medicines was 41,155 billion RSD, which in respect to budget of 225,86 billion RSD makes 18,22%, which is one quarter less than stated in the World Bank Report (25%).

[5] Source: World Bank, Republic of Serbia, Public Finance Review, 2015.

countries. This suggests the existence of inefficiencies driven by over-perscription of medicines, especially antibiotics.[6] Over-the-counter (OTC) medicines are the smallest segment of the market, accounting for 10.28% of total pharmaceutical sales. Patented drugs are also a considerable segment of the pharmaceutical market, worth some 27.78% of the market in value terms. Serbia's Republic Health Insurance Fund provides full and partial reimbursement to insured citizens for pharmaceuticals placed on its positive reimbursement list. Currently, the reimbursement list consists primarily of generic drugs and the market segmentation reflects this.[7]

The Serbian pharmaceutical market is split between domestic production and imports of pharmaceuticals from foreign multinationals, as the country is home to several, large generic drug makers such as state-owned Galenika, Stada subsidiary Hemofarm and Actavis subsidiary Zdravlje. State-owned Galenika is currently undergoing a process of privatization, with the Serbian government actively seeking buyers for the enterprise as part of its reform agenda with the International Monetary Fund (IMF). Presently, most multinationals are involved in the Serbian market through imports of their product portfolios or through licensing and marketing agreements with local players. Roche is one of the leading players on the market, with other multinational companies in Serbia including Merck, GlaxoSmithKline, Pfizer, Sanofi, Novo Nordisk, Abbot, Janssen-Cilag and AstraZeneca. About 70 foreign companies have representative offices in the country, with the majority being members of the Association of Foreign Pharmaceutical Manufacturers in Serbia.

Serbia's medical device market was valued at an estimated USD 155.4mn in 2013, equal to USD 16 per capita, 3.5% of health expenditure and 0.4% of GDP. Serbia is the smallest CEE market in per capita terms. In 2013, consumables was the largest product category within the medical device market, accounting for 25.2% of the overall total, followed by other medical devices and diagnostic imaging with market shares of 22.7% and 21.2%, respectively.

With the continuous convergence of the economy and the government’s support for structural improvements, drug consumption and healthcare spendings are expected to rise in mid to long-term.

2.2.3 Procurement of medicines and medical supplies in public healthcare

Healthcare institutions that are part of the Network Plan adopted by the Government of the Republic of Serbia, are supplied with medicines and medical supplies that are perscribed and issued by the funds of mandatory social insurance upon conducted procedure of centralized public procurement managed by RHIF in the name and for the account of healthcare institutions from the Network Plan. HCIs also order other medicines and medical supplies from suppliers, the ones that are not on the RHIF’s list of approved medicines, so RHIF does not have the obligation to provide funds for these medicines and the institutions have to finance them from their own generated income. Each individual HCI takes the responsibility to pay for

[6] Source: World Bank, Republic of Serbia, Public Finance Review, 2015

[7] Source: BMI – Serbian Pharmaceuticals and Healthcare report
http://store.bmiresearch.com/serbia-pharmaceuticals-healthcare-report.html

the ordered medicines and medical supplies, and based on the contracts concluded with RHIF. Also, HCIs have the obligation to pay for their liabilities in due time, as perscribed by the Law.[8]

Methods and the process of planning and procurement of medical supplies for individual HCIs is determined and regulated by the "Regulation on planning and type of goods and services for which centralized public procurement procedures are being applied". This Regulation is published in the Official Gazette of Republic of Serbia no 29/13.

Planning of healthcare institution needs for providing goods and services can be performed only if the institution is a part of the Network Plan of Healthcare institutions and if RHIF has provided funds for such a purpose in its annual financial plan.

In order to plan centralized public procurements it is necessary that each healthcare institution adopts its own plan of needs for medical supplies for the upcoming year. This plan is being adopted by the Managing Board of the healthcare institution upon suggestion of the Director of the Institution. Each institution prepares its own plan based on:

- Work plan of the HCI from previous budget year
- Consumption of medicines and medical supplies in previous budget year, based on the invoiced services towards RHIF
- Final Financial Reports of HCI for previous year
- Working plan of the HCI for the current budget year
- Planned consumption of goods and services for which the process of public procurement is being conducted, for the current budget year
- Financial assets available and planned for goods and services for which the process of public procurement is being conducted, for the current budget year (RHIF needs to submit these data to HCIs no later than 10th of July of the current year, based on Draft of Republic Budget and Fiscal Strategy for organizations of mandatory social insurance for the upcoming budget year).

HCIs need to submit the plan of needs for medicines and medical supplies to the Institute for Public Health of the Republic of Serbia, no later than 20th of July. Based on all collected and analyzed individual plans the Institute for Public Health of the Republic of Serbia determines a Plan of centralized public procurements and submits it to RHIF no later than 15th of August for the upcoming year.

RHIF starts the procedure of centralized public procurement for the upcoming budget year no later than 1st of November or no later than the day when the Government adopts a proposal of the Law that regulates the Republic Budget.

Goods and services that are being procured in this manner are:

- Energy material (coal, gas, etc.)
- Insurance of HCI property and insurance of HCI employees
- Medicines that are on the List of medicines prescribed and issued from the funds provided for mandatory social insurance
- Medical gases

[8] Source: Serbian Chamber of Commerce – Public-Private Dialogue for Sustainable Healthcare, November 2015.

- Medical supplies
- Sanitary and medical consumables
- Material for dialysis
- Medical alcohol
- Caps, boots and surgical robes

The issue with this manner of procuring goods and services is that the centralized system of procurement is being poorly audited. There is an obvious lack of control inside the system. During our research we have not noticed that there isn't any kind of stock control per institution from the side of RHIF – the institution that is actually financing the centralized public procurement.

There is a lack of control mechanisms that would assure the RHIF that each institution prepares a plan according to its real needs for medicines and medical supplies.

Pharmaceutical companies that have contracts with RHIF are obliged to continuously provide medicines and other medical supplies to all HCIs in the Network Plan, upon public procurement procedures and centralized public procurement that is conducted by RHIF in the name and for the account of HCIs in the Network Plan. Pharma companies take the responsibility to supply all the institutions from the Network Plan, and also have the obligation to conclude contracts with all HCIs from the Network Plan, even with those that are indebted or have blocked accounts. In centralized public procurement procedures, pharma companies are obliged to provide banking guarantees for fulfillment of contracted obligatons and for seriosity of the offer. On the other hand, their claims towards HCIs are not secured with any securitization instrument, so they carry all the burden of delays in payment from the side of HCIs.

Currently there is an issue with unpaid liabilities from HCIs to Pharma companies – suppliers of medicines due to lack of funds. Even though RHIF approves financial assets to HCIs for medicines and medical supplies according to annual financial plan that is based on the individual plans of HCIs, there is still a large amount of unpaid liabilities by HCIs.

Even though according to World Bank data, the Government has saved over 32,6 million EUR thorugh the process of public procurement, hospitals are accumulating payment arrears to suppliers. The significant cost reductions on pharmaceuticals through public procurement process has led to savings at the central level, but contributed to financing problems for healthcare institutions. Many of them were using their "rebates" from pharmaceutical purchases (up to 30%) to finance local spending, including hiring non-contracted staff who are not subject to central monitoring of staffing controls.[9]

According to data available in the Register upon the Law on deadlines for settling financial liabilities in commercial transactions, healthcare institutions that are beneficiaries of RHIF have a total of unsettled liabilities amounting 9.530.381.557,34 RSD (close to 80 million EUR) as at 15th of October 2015, while the total number of unsettled transactions is 172.178.[10]

It has been noticed that there is an increasing trend of unsettled liabilities of healthcare institutions that are part of the Network Plan, so there is a significant concern that some of the

[9] Source: World Bank, Serbian Public Finance Review, 2015
[10] Source: http://www.mfin.gov.rs/pages/issue.php?id=9391(Преглед из регистра по Закону о роковима измирења новчаних обавеза у комерцијалним трансакцијама)

institutions will not be able to finance their liabilities in the following period. This is just another fact pointing out the financial unsustainability of the system.

Centralized public procurement process functions in a way that all HCIs after submitting their annual plans of needs for medicines and medical supplies are being approved a certain financial limit but the structure of orders within this limit is changeable. But, of course, once the limit is reached, healthcare institutions still have the obligation of providing healthcare to all citizens (both insured and uninsured), so they continue purchasing supplies for which they simply do not have enough available funds.

2.2.4 Innovative pharmaceutical products in Serbia

List of medicines approved and used in the Republic of Serbia consists of:

- List A – Medicines perscribed and issued in the prescription form; For medicines on the A list, participation that the insures pay is being determined in the fixed amount of 50 RSD for each quantity of the issued medicine that is equal or less than medicines inside the package on the List of medicines.
- List A1 - Medicines perscribed and issued in the prescription form with therapeutical alternative among medicines in A list; For medicines on the A1 list, participation that the insures pay is being determined as a percentange ranging from 10% to 90% of the retail price of the medicine.

For the medicines from A and A1 list, that are being used during hospital treatment, insurers do not pay participation, neither the fixed amount nor as a percentage.

- List B – Medicines used during outpatient and hospital treatment in healthcare institutions; For medicines on the B list that are being used in HCIs on primary level of care, participation that the insures pay is being determined in the fixed amount of 50 RSD for each order.
- List C – Medicines with special regime;
- List D – Medicines that are not licensed in the Republic of Serbia, but are necessary in diagnosis and treatment;

For medicines on B,C and D list, RHIF provides funds in the full amount of the retail price of the medicine.[11]

In the below table we can see total RHIF expenditures for medicines in 2014. We can see that RHIF expenditures for medicines account for about 20-21% of total RHIF expenditures.

[11] Source: Regulations on the List of Medicines Perscribed and Issued frim Funds of Mandatory Social Insurance

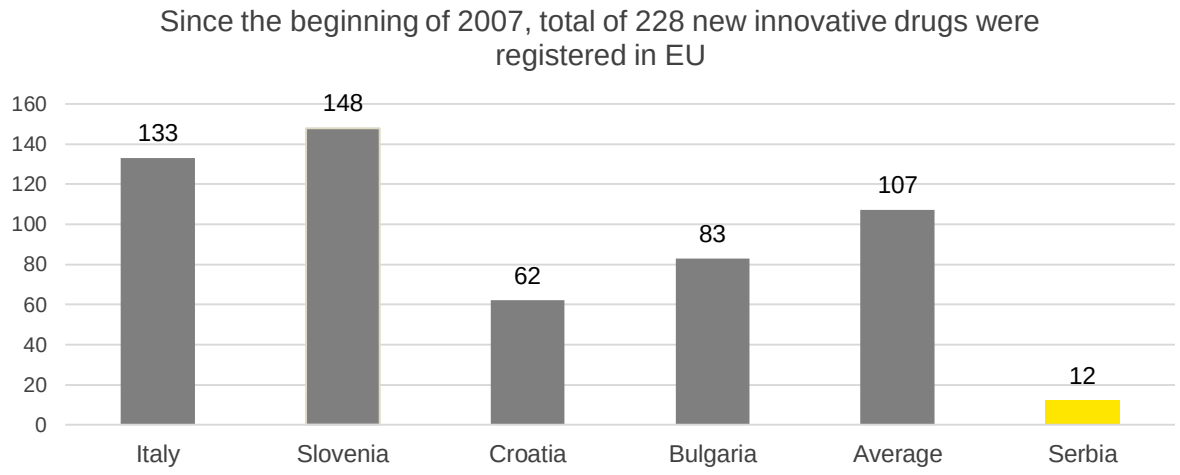
Table 6: total RHIF expenditures for medicines in 2014

RHIF 2014 data	**Total RHIF Incomes**	**Total RHIF Expenses (RSD)**	**Total RHIF Expenses (USD)**	**Total RHIF Expenses (EUR)**	**Total RHIF Expenses (USD per capita)**	**Total RHIF Expenses (EUR per capita)**
	217.703.145.000	220.158.821.000	2.486.546.430,99	1.876.886.794,54	348,74	263,24
	Medicine expenses as % of total RHIF expenses	**Medicine expenses (RSD)**	**Medicine expenses (USD)**	**Medicine expenses (EUR)**	**Medicine expenses (USD per capita)**	**Medicine expenses (EUR per capita)**
	20,89%	46.000.000.000,00	519.539.191,33	392.156.862,75	72,87	55,00

Source: RHIF Financial reports for 2014

During our research and interviews with representatives from pharma companies, we have been pointed out the issue of Serbia reimbursing fewer new innovative pharmaceutical products since 2007. when compared with other EU countires. Number of listed medicines in Serbia in 2013. was 2.386 out of which 347 generics, ***only 28 innovative***, 348 original.

Picture 5: Number of innovative pharmaceutical products introduced in Serbia in comparison with EU countries



Source: IMS Health International Comparison of Serbian Market 2014

As it can be seen on the above picture, In direct comparison of Bulgaria and Serbia, two countries with similar population and GDP, Serbia has listed 12 and Bulgaria has listed 83 new medicines.

In summary, Serbia has almost 9 times less new innovative drugs on the reimbursement list compared to Italy, Slovenia, Croatia and Bulgaria, with the difference being particularly high for innovative drugs registered in EU since 2010. In numbers, there are 12 innovative drugs registered after 2007. in EU that are reimbursed in Serbia, while Italy has 133, Slovenia 148, Croatia 62 and Bulgaria 83.

Serbian healthcare budget is not the lowest in the observed group, but despite the fact that Bulgaria has 200 million EUR less in HC budget, their portion of the budget dedicated to pharmaceuticals is almost 110 million EUR higher than ours, and they reimburse 71 new innovative drugs more than Serbia.

Issue identified: Low reimbursement rate for new innovative medicines on Serbian market;

Recommendation: Procedures for reimbursement of new innovative medicines on the market should be simplified as this type of therapy can significantly reduce other healthcare costs both in the short and in the long run.

****For more detailes see RECOMMENDATIONS part of this Document.*

Issue identified: Poor management of public procurement process has a diverse effect on financial sustainability of the HC System;

Recommendation: Consider establishing a software solution for stock management, and optimization of procurement of medicines and medical supplies. Establish a sustainable liabilities financing method starting from estimations of real needs aligned with real financial capacities. In the end, in order to protect quality of patient health services, it is essential to balance the public procurement process and ensure that lowest price cannot be the only decision driver. Quality and technical specifications should play a significant role in making selection criteria.

****For more detailes see RECOMMENDATIONS part of this Document.*

Centralized public procurement

Centralized system of public procurement is **poorly audited**. There is a **lack of control** inside the system. RHIF does not conduct stock control inside health care institutions.
A software solution for stock optimization level, optimization of procurement of medicines and medical supplies would significantly reduce current PP costs.

Pharma Market

Pharmaceutical sales in 2014. were worth 2.54% of GDP and almost 23.17% of total health expenditures
Underdeveloped pharma market, facing medicine shortages and long waiting times for patients.

2.3 Overview of the Healthcare Spending in Serbia

Key chapter points: ***Although expenditures on healthcare in Serbia are high in relative terms, they are in fact low and insufficient in absolute terms. Serbia's healthcare expenditures in 2014. were RSD 401.44bn (USD 4.54bn); equating to a per capita healthcare expenditure of USD 636 in 2014. Government healthcare expenditures account for a majority of healthcare spending, equivalent to 61.03% of total healthcare expenditures. The majority of private expenditure is out-of-pocket. Public expenditures mainly consist of RHIF expenditures (93.6% of total public spending in 2013). Hospitals account for a dominant share of healthcare expenses while primary healthcare institutions in 2013. accounted for less than one third of the healthcare expenses of hospitals. Overall, Serbia has a relatively strong hospital sector, although the need for modernization is great, especially in public sector. For specific medical procedures and interventions that are expensive, waiting lists are being created.***

According to WHO data, Serbia is among countries with highest health expenditures when observed as a percentage of GDP. About 60% of health expenditures are being financed from public expenditures, i.e. mainly RHIF, while the remainaing part are predominantely out-of-pocket expenditures.

National healthcare system absorbs a large portion of Serbian GDP (10.6% in 2013). This share in GDP remained relatively high compared with other transition countries and EU countries. Trend of healthcare spending as a percent of GDP in Serbia together with other key indicators is given in Table 7, and level of healthcare spending in comparison with selected European countries in 2013. is presented in Picture 6.

When it comes to expenditures on health, WHO methodology for measuring this type of costs says that they are: ***spendings in a given country over a defined period of time regardless of the entity or institution that financed and managed that spending.***[12]

As we can see from data in Picture 6, in 2013, Serbia had the highest level of healthcare expenditures among the observed countries by two criteria, and second highest by one criterion. Total expenditure as percent of GDP is very high in comparison with other countries, and only Greece had similar value. Total public and private health spending at 10.6% of GDP is high and it has been increasing faster than the regional average during the last decade. In 2013. total health spending in EU on average was 8,6% for EU countries and 7,1% for the Western Balkan countries. In absolute terms total average healthcare spending per capita (990 USD) is higher than the average in Western Balkan (790 USD) but significantly lower than the EU average (2.970 USD).[13] Although government expenditure in Serbia was the highest in relative terms, there were also the private sector healthcare expenditures, which were the second highest, so it becomes clear why total healthcare expenditures as percent of GDP were so high.

[12] Source: http://www.who.int/health-accounts/methodology/en
[13] Source: World Bank – Serbian Public Finance Review, 2015

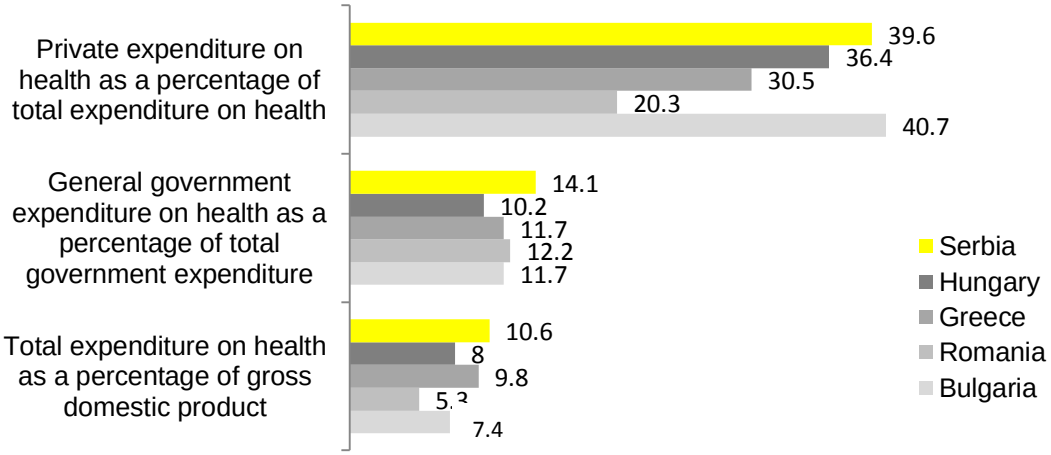
In table 6 we can see key healthcare indicators in Serbia in the period between 2009-2013, based on data of Institute for public health "Dr. Milan Jovanovic Batut".

Table 7: Key healthcare indicators in Serbia in 2009-2013

Indicator	2009	2010	2011	2012	2013	Trend
Total health care expenditures in mil. USD*	4.482,0	4.094,1	4.832,1	4.270,9	4.824,6	↗
Total health care expenditures per capita in USD	577,0	546,0	622,0	561,0	632,0	↗
Total health care expenditures per capita in PP USD	1.166,0	1.176,0	1.195,0	1.250,0	1.313,0	↗
Total health care expenditures as % of GDP	10,5	10,4	10,4	10,5	10,6	→
Public health care expenditures as % of GDP	6,5	6,4	6,5	6,4	6,4	→
RHIF expenditures as %o of GDP	6,1	6,0	6,0	6,0	6,0	→
Private health care expenditures as % of GDP	4,0	4,0	3,9	4,1	4,2	↗

Source: Analysis of Health Care Expenditure Movement, http://www.batut.org.rs/download/izdvajamo/analizaKretanjaRashodaZaZdravstvenuZastitu2015.doc

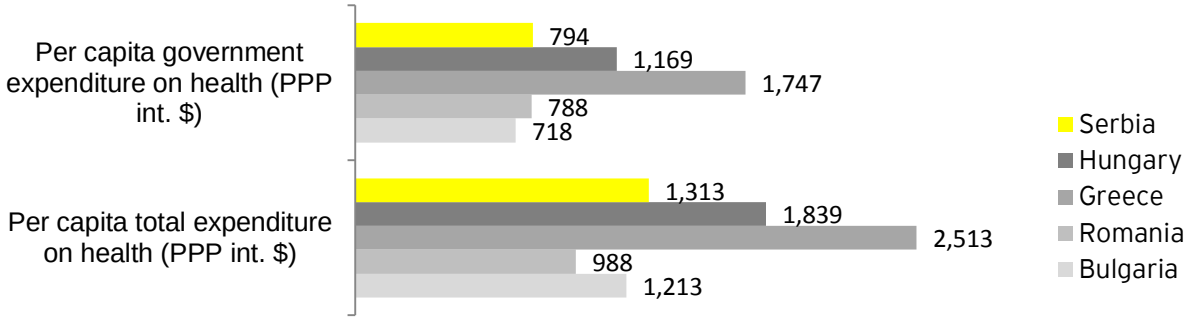
Picture 6: Expenditures on health in Serbia in 2013 (%)



Source: World Health Organization: http://www.who.int/countries/en/

Although expenditures on healthcare in Serbia are high in relative terms, they are in fact low and insufficient in absolute terms. That can be clearly illustrated with data about healthcare spending per capita in PPP int. $ in Serbia and selected European countries in 2013, which are presented in Picture 7. Serbia'a expenditures are in the middle of the list, with Bulgaria and Romania below it, but with Greece and Hungary above it.

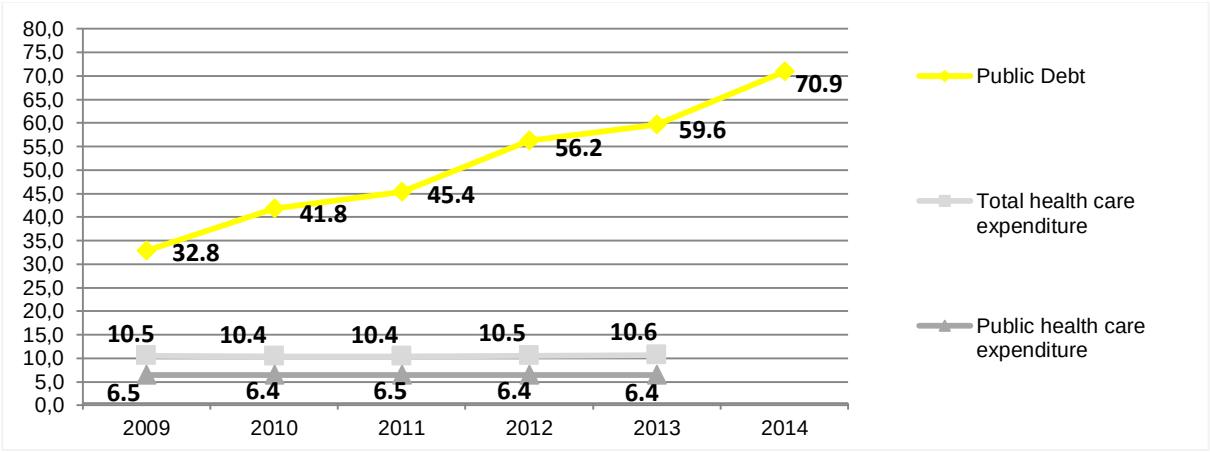
Picture 7: Public and total expenditure on health in Serbia in 2013 (PPP int. $)



Source: World Health Organization: http://www.who.int/countries/en/

During the observed period total healthcare expenditure as percentage of GDP was steady, although there were two years of GDP decline, and then its recovery. Also, public debt as percentage of GDP almost doubled in the period 2009-2013, but healthcare spending remained relatively high in the same period (presented on Picture 8).

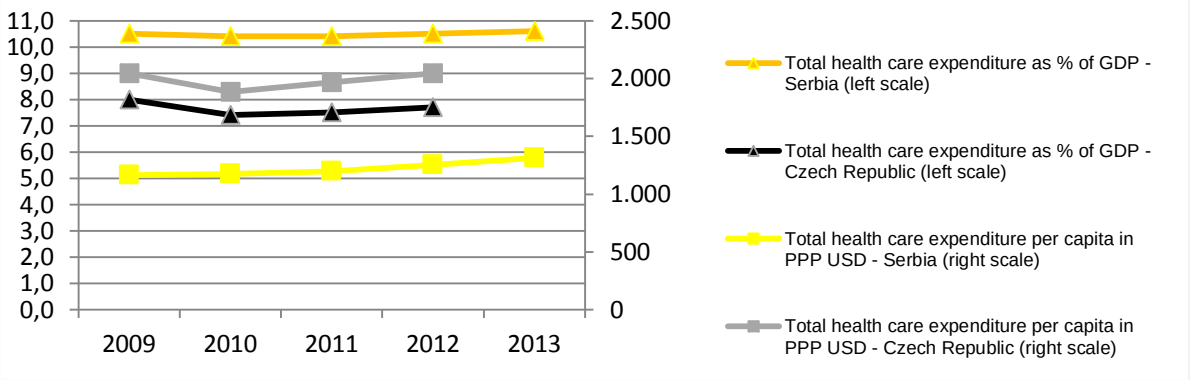
Picture 8: Public Debt and healthcare expenditure trend line as % of GDP



Source :National Bank of Serbia – Key macroeconomic indicators: http://www.nbs.rs/internet/english/80/index and Institute for Public Health Dr Milan Jovanović Batut - Healthcare expenditure movements http://www.batut.org.rs/download/izdvajamo/analizaKretanjaRashodaZaZdravstvenuZastitu2015.doc

Total healthcare expenditures per capita in PPP USD increased for 12.6% (from the amount of 1,166 PPP USD in 2009, to the amount of 1,313 PPP USD in 2013), but they were still lower than in more developed transition countries. Trend of these two indicators in 2009-2013. is given on Picture 9.

Picture 9: Total healthcare expenditure as % of GDP and per capita in PPP USD



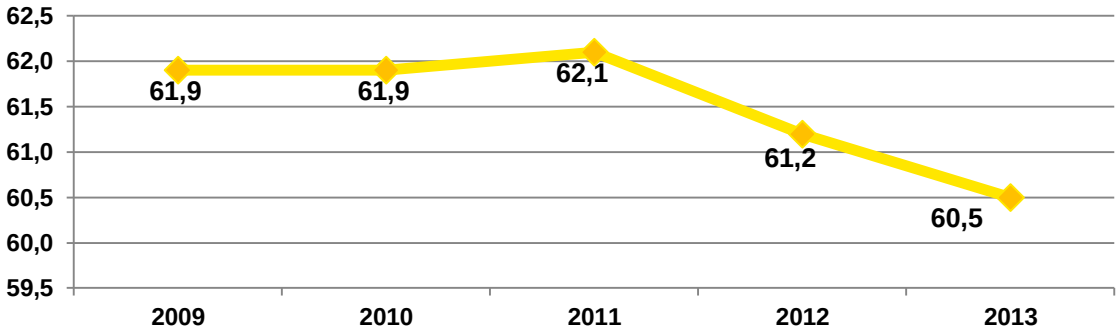
Source: On the basis of Analysis of HealthCare Expenditure Movement, http://www.batut.org.rs/download/izdvajamo/analizaKretanjaRashodaZaZdravstvenuZastitu2015.doc

In total amount of healthcare expenditures in Serbia, public expenditures have dominant share, even though it has declined during observed period (from 61.9% in 2009 to 60.5% in 2013).

Serbia's healthcare expenditures in 2014. were RSD 401.44bn (USD 4.54bn). We calculate that government healthcare expenditures in 2014. rose by 5.60% in local currency terms to RSD 244.99bn (USD 2.77bn). This equated to 5.74% of GDP. Private healthcare expenditure in 2014. rose by 3.3% in local currency terms to RSD156.45bn (USD1.77bn). Government healthcare expenditure accounts for a majority of healthcare spending, equivalent to 61.03% of total healthcare expenditure. The majority of private expenditure is out-of-pocket as opposed to private health insurance payouts, reflecting the prevalence of informal payments in the Serbian healthcare system and the chronic underfunding of healthcare expenditure by the state.[14]

Trend of public healthcare expenditures as percent of total expenditures is presented on Picture 10.

Picture 10: General Government healthcare expenditures in Serbia as % of total healthcare expenditures



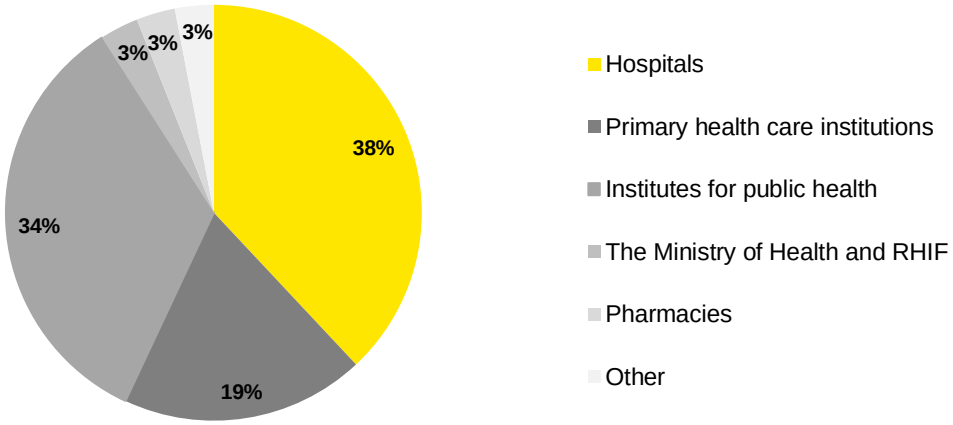
Source: World Health Organization: http://apps.who.int/gho/data/node.main.75?lang=en

[14] Source: BMI

Public expenditures mainly consist of RHIF expenditures (93.6% of total public spending in 2013) while the rest are expenditures of the Ministry of Health, for current expenses and investments in infrastructure. Private spending is relatively high in comparison with selected European countries and, as we can see in Picture 6, in 2013. only Bulgaria had a higher amount of private spending. It is estimated that more than 90% of private spending comes from out of pocket expenses. In 2013, 95.6% of private expenses were out of pocket expenses, while remaining 4.4% of expenses are those from private insurance and a few companies which have their own healthcare (e.g. Hemofarm – Stada), meaning out of pocket share in GDP was about 3.8%.[15] Private healthcare institutions absorbed about 34% of total healthcare spending in 2013, while public institutions contributed in total expenses with about 66%.[16]

Hospitals account for a dominant share of healt care expenses, although this share declined during the observed period (from 4.7% of GDP to 4.0%, and from 53.4% of total expenses to 38.0% of total expenses in 2013). Primary healthcare institutions in 2013 accounted for less than one third of the healthcare expenses of hospitals (1.5% of GDP and 17% of total healthcare expenses). This large difference decreased during the observed period, so in 2013. healthcare spending for primary healthcare institutions was about two times lower than for hospitals (2% of GDP and 19% of total expenses) as we can see in Picture 11.

Picture 11: Structure of healthcare expenses by type of institutions in 2013



Source: Analysis of Health Care Expenditure Movement, http://www.batut.org.rs/download/izdvajamo/analizaKretanjaRashodaZaZdravstvenuZastitu2015.doc

Healthcare expenditure as percentage of GDP is expected to slowly decline from 10,6% (2013) to 9.8% (2018). This is due to the fact that GDP is forecasted to grow faster than healthcare spending.

Hence, indicating increasing private wealth and higher per capita income in midterm, private sector healthcare spending is expected to grow from 36.9% to 39.3% between 2013. and 2018.

[15] World Health Organization: http://apps.who.int/gho/data/node.main.75?lang=en
[16] *Analysis of Health Care Expenditure Movement*, http://www.batut.org.rs/download/izdvajamo/analizaKretanjaRashodaZaZdravstvenuZastitu2015.doc

Table 8: Healthcare expenditure movements with forecasts (2010-2018f)

Indicator	Year								
	2010	2011	2012	2013	2014f[17]	2015f	2016f	2017f	2018f
Health expenditure (US$ bn)	3.97	4.51	4.07	4.43	4.48	4.55	4.69	4.98	5.37
Health exp. (US$ bn), % chg y-o-y[18]	-5.7	13.6	-9.8	8.8	1.1	1.5	3.1	6.2	7.8
Health expenditure per capita (US$)	411.99	470.31	426.35	465.89	473.29	482.65	500.26	534.27	579.12
Health expenditure (% GDP)	10.74	10.43	10.66	10.36	10.34	10.06	9.93	9.78	9.79
Government health exp. (US$ bn)	2.46	2.81	2.58	2.8	2.83	2.85	2.91	3.08	3.32
Gov. health exp. (US$ bn),% chg y-o-y	-5.7	14.1	-7.9	8.3	1	0.7	2.3	5.7	7.8
Private health expenditure (US$ bn)	1.52	1.71	1.49	1.63	1.66	1.7	1.78	1.91	2.06
Priv. health exp. (US$ bn),% chg y-o-y	-5.7	12.7	-12.8	9.6	1.4	2.8	4.5	7.2	7.8

Overall, Serbia has a relatively strong hospital sector, although the need for modernization is great, especially in the public sector. Also, the hospital sector still dominantly remains in the domain of public healthcare providers. The Serbian government has made some progress towards upgrading its outdated healthcare facilities, with the help of international aid. For example, since 2003, the World Bank has approved loans that totaled just under USD 80mn for the restructuring of the health services. Hospitals and clinics have long relied on imported products, as the few small, low-tech companies cannot meet the demand for equipment. Most requirements need to be imported, and the USA and Germany are major trading partners.

Issue identified: ***Low inclusion of private sector, but also low development of private sector in secondary/tertiary level of care;***

Recommendation: Greater inclusion of private sector is necessary in the years to come in order to achieve financial sustainability, greater quality of services provided and greater availlability of healthcare.

****For more detailes see RECOMMENDATIONS part of this Document.*

2.3.1 Waiting lists

When working with limited financial resources, typical for almost all healthcare systems in the world, for specific medical procedures and interventions that are expensive, waiting lists are being created, in order to provide equal distribution of healthcare protection and necessary health services, and to have a rational use of available resources under equal conditions for all patients.

In Serbia, waiting lists are established for the following medical interventions and procedures that are not urgent

- Computerized tomography (CT) of the head, neck and spinal column,

[17] forecast
[18] year-on-year

- Magnetic Resonance Imaging (MRI) of the head, neck and spinal column,
- Diagnostic coronary angiography and / or cardiac catheterization,
- for CABG,
- installation of permanent artificial heart (PAHs)
- installation of cardioverter defibrillator (ICD)
- implantation of artificial heart valves,
- implantable grafts of synthetic materials and endovascular graft prosthesis,
- installation of endovascular prostheses
- Installation of hip and knee endoprostheses,
- installation of ostheosynthetic materials
- instrumental segmental correction of spinal deformity in children and
- ophthalmic interventions such as
    - Cataract Surgery and
    - Intraocular Lens implantation.[19]

Following an assessment of a doctor that indicates some of these procedures for a certain patient, personal and health information of the patient are recorded, and on the basis of them the place on the waiting list is determined.
Only the patient can see his/her place on the waiting list in order to protect privacy and in accordance with the Law.

Patient's place on the list can be seen in a health institution where the health service for which he/she is waiting is being provided, or by checking the website of the Republican Health Insurance Fund, by entering a protected personal identification number from the ID card (personal identification number) whose first seven digits as well as the last digit are seeable.

According to World Bank and RHIF data in 2013 nearly half (46,6%) of patients who underwent an intervention in Serbia had to go on a waitlist, and only one third of waitlisted patients (36% of them) actually received treatment. Average waiting time was 450 days for hip replacement, compared to 101 days on average in OECD countries, 707 days for knee replacement (123 days in OECD). Also waiting lists encourage bribery especially in the area of hospital treatment.[20]

Issue identified: ***Waiting lists for elective procedures are significantly longer than in OECD countires and flow of patient information among healthcare institutions is poor.***

Recommendation: Develop an integrated information system that connects all healthcare institutions that excute procedures on waiting lists with every other hospital in the Network Plan, as well with private HCIs in the country, so the software can pick the data to allow the search for optimal solutions for each patient.

****For more detailes see RECOMMENDATIONS part of this Document.*

[19] Source: Republic Health Insurance Fund: http://www.rfzo.rs/index.php/osiguranalica/listecekanja
[20] Source: World Bank: Republic of Serbia – Public finance review, 2015

III Public Health System Funding Value Chain

3.1 General overview of Serbian healthcare system financing

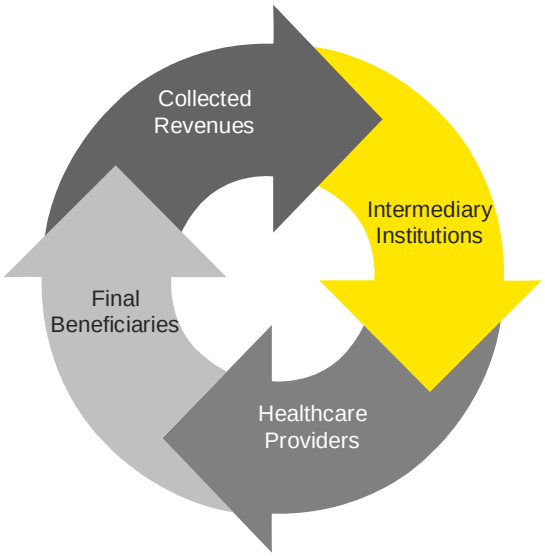
Key chapter points: ***The national healthcare system in Serbia is mainly based on mandatory medical insurance of all employed citizens. Although insured and their families are covered with such insurance, there are significant out of pocket expenditures for different types of additional health services.***

The national health system in Serbia is funded by a combination of Republic Health Insurance Fund (RHIF), Pension and Disability Insurance Fund (PDIF), Military Social Insurance Fund (MSIF), transfers from the Republic Budget, and out-of-pocket payments together with private health insurance. The RHIF is a predominant source of funding. Money is being transferred from the Republic Budget to RHIF guaranteeing that health insurance coverage is also provided to unemployed, internally-displaced people and refugees, as well as to people who belong to vulnerable categories. The aim of the organization is to make the health system equal for every citizen no matter what their status is, but in practice this is not always the case.

The national healthcare system in Serbia is based on mandatory medical insurance of all employed citizens with several local agencies providing health insurance. Insurance coverage is provided to all employed persons, pensioners, self-employed people and farmers who are contribution payers, including the spouse, dependent children and elderly parents of the insured person. The government covers the cost of health insurance for vulnerable groups (disabled, unemployed,etc.) per article 22 of the Law on Health Insurance.

Although the insured and their families are covered with such insurance, there are significant out of pocket expenditures for different types of additional health services (laboratory analyses, dental services, medications etc.). Private healthcare sector is still in the early stages of development, especially in the area of hospital treatment. On the other side, public sector is faced with stagnation and with declining of revenues from contributions, and also with raising deficit, which is covered by transfers from Republic Budget.

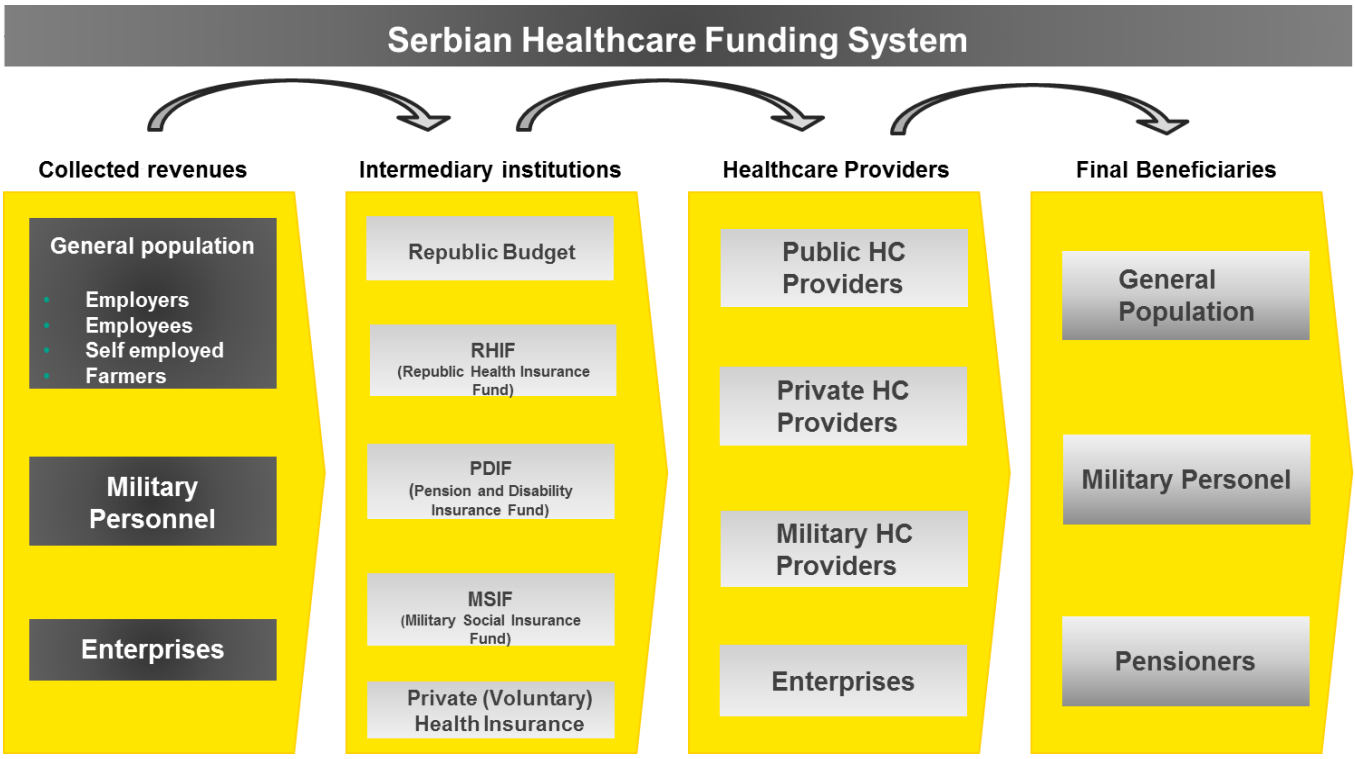
Healthcare system can be presented as a cycle. Funding starts with individuals, money collection and allocation is done by an intermediary institution, healthcare providers receive money form intermediary institutions and finally provide serviced to individuals.



Scheme on Picture 12 represents a general overview of Serbian Healthcare system. First box shows main sources of revenues, of which the largest portion is being collected via contributions from employers, employees, self-employed and farmers. In the second box are shown main institustions that distribute the money towards healthcare providers (third box), and in the end, the final box shows end-users i.e. beneficiaries of the national healthcare system.

Next chapter explains the nature and problems within main identified relationships inside the national healthcare system.

Picture 12: Healthcare funding system in Serbia



3.2. Revenue Collection

Key chapter points: ***Main sources of revenues in Serbian healthcare system are contributions for mandatory social insurance and transfers from the Republic Budget. One of the initiatives for increasing own income of healthcare institutions was introducing additional work outside working hours.***

Financing of Serbian public healthcare system is regulated by the Law on Budget System ("Official Gazette of RS", no. 54/2009, 73/2010, 101/2010, 101/2011, 93/2012, 62/2013, 63/2013 - corr., 108/2013 i 142/2014).[21]

This law regulates the planning, preparation, adoption and implementation of the budget of the Republic of Serbia. This Law also regulates preparation and adoption of the financial plans of the Republican Fund for Pension and Disability Insurance, Republic Health Insurance Fund, Military Social Insurance Fund and the National Employment Service - which are all together called organizations for mandatory social insurance. The Law also regulates budget accounting and reporting, financial management, control and audit of public funds and the budget of the Republic of Serbia, local government budget and financial plans of organizations for mandatory social insurance; competence and organization of the Treasury Board, as an administrative body within the Ministry of Finance and local government treasury; other issues of importance for the functioning of the budget system.

Organizations for mandatory social insurance are being considered as *direct budget beneficiaries*, while all institutions that are being financed from public revenues thorough direct budget users are being considered as *indirect budget beneficiaries*. That actually means that indirect budget beneficiaries are all hospitals, clinics, polyclinics, health centers and other institutions that are being financed via organizations for mandatory social insurance.

For financing the rights under the pension and disability insurance, health insurance and unemployment insurance, organizations for mandatory social insurance have the right to the following public revenues and earnings, as follows:

- Contributions for mandatory social insurance;
- Donations and transfers;
- Other revenues and incomes in accordance with the Law.

The process of preparation and adoption of the budget and financial plans of organizations for mandatory social insurance is being carried out according to the budget calendar, where the 15th of December is the final date when the National Assembly decides on the approval of the above mentioned financial plans. Once approved by the National Assembly, financial plans of mandatory social insurance organizations need to be published in the Official Gazette of the Republic of Serbia.

[21] Source: the Law on Budget System ("Official Gazette of RS", no. 54/2009, 73/2010, 101/2010, 101/2011, 93/2012, 62/2013, 63/2013 - corr., 108/2013 i 142/2014)

Fiscal strategy for 2015 has been adopted by the National Assembly in January 2015. In the meantime all public institutions had the obligation to deliver drafts and final budget plans perscribed by the Law. It is therefore obvious that planning and budgeting inside the system is not fuctoning properly.

Issue identified: Planning and budgeting are not aligned with the Budget calendar and Fiscal Strategy

Recommendation: Imroved process of preparing annual plans and budgets is of crucial importance for financial sustainability of the system

****For more detailes see RECOMMENDATIONS part of this Document.*

Executive Directors of direct or indirect budget beneficiaries are responsible for legal, dedicated, cost-effective and efficient use of budget appropriations. An indirect budget beneficiary who is also a beneficiary of the organization for mandatory social insurance is responsible for the accounting of their own transactions, and a direct budget beneficiary is responsible for the accounting of its own transactions, and in the framework of its powers for accounting transactions of indirect budget beneficiaries falling within its jurisdiction.

Public healthcare institutions are founded in accordance with Network Plan of health institutions, adopted by the Government of the Republic of Serbia upon suggestion of Ministry of Health. They can be founded by Republic, autonomous province, city or municipality. Primary level health centers and pharmacies are founded by municipality or city, clinical & hospital centers are founded by the city, while general hospitals, special hospitals, clinics, institutes and clinical centers are founded by Republic of Serbia or an autonomous province. In accordance with the Law on healthcare (Official Gazette of RS no. 107/2005, 72/2009, 88/2010, 99/2010, 57/2011, 119/2012, 45/2013) founder of healthcare institution provides means in its budget intended for maintenance and equipping of healthcare institutions, i.e. investments and ongoing maintenance of premises, medical and non-medical equipment, vehicles etc.

Regulation on Network plan of HCIs determines the number, structure, capacities and space plan of HCIs in state ownership as well as their organizational units upon levels of healthcare, organization of service of urgent medical help.

The Network Plan of HCIs does not include private HC providers. Monitoring of private HCIs in the system is on a very low level.

Investments in public institutions are mostly financed by the founder. In case of primary level healthcare institutions in Belgrade, certain amount of investments can be financed by local municipalities, but these are usually not significant amounts.

Other sources of financing are transfers from RHIF (for operating expenses), revenues from use of public means for services which are not covered by contract with RHIF (renting of available premises and movable assets owned by the Republic, autonomous provinces, cities or municipalities; performing of scientific and educational activities), donations, legacies and other sources (charging to patients who have to pay medical services, destroying medical waste for other institutions, issuing various medical verifications) in accordance with the Law.

Acquisition of donations, legacies and other sources of incomes significantly depend on expertise, capability and innovativeness of the Head of institution. This can be a problem since, according to the section 132 of the same Law, doctors and medicine workers that are on executive positions in institutions are not required to have education in management, which can lead to having unexperienced management with more medical than business expertise.

In previous years donations were mostly monetary, but since now official tenders have to be organized for each purchase of materials, this type of donations has been significantly reduced and today greatest extent of donations (over 90 %) are embodied in the equipment, that very often comes with a condition that the healthcare intstitution has to purchase certain products from a specific donor.

Ministry of Health also does not have the jurisdiction to monitor donations in individual instituions neither by type nor by value. Institute for Public Health Dr. Milan Jovanović Batut keeps record on all staf and equipment, and individual HCIs have the obligation to report any equipment received in the prosess of donation to this Institute. The Instiute does not have any inspection jurisdictions and therefore does not monitor condition, quantitites and availability, nor the useful purpose of donated equipment.

Issue identified: Donations are being monitored only by value. There is a very low level of monitoring of the type of donated equipment, items received and their utilization;

Recommendation: Increased financial controlling actions in the segment of Donations monitoring.

****For more detailes see RECOMMENDATIONS part of this Document.*

Additional initiative for revenue increase in public sector

One of the initiatives for increasing own income of healthcare institutions was introducing additional work outside working hours. Ministry of health of Republic of Serbia, has allowed health workers, health associates, and other employees in health institutions to, according to sections 199-202 of Healthcare Law ("Official Gazette of RS", no. 107/2005, 72/2009 – other act, 88/2010, 99/2010, 57/2011, 119/2012, 45/2013 and 93/2014), perform medical services in health institutions outside regular working hours. The idea was that this type of work could be perfomed within the same institution or another institution. This work must not affect the work organization of the individual parts of the health institution or a health institution as a whole.

Health workers, health associates, and other employees in health institutions are obliged to sign a contract on additional employment with an employer for whom they perform additional work. This work-time is limited to one-third of regular work-time.

Type of services that can be provided:

1) Health services that are not covered by compulsory health insurance
2) Health services for the organizations of compulsory health insurance when there is no other way to provide appropriate staff
3) Health services for persons that do not have the status of an insured person.

Individual patients or their insurance company, in compliance with regulations of voluntary health insurance, need to pay an established compensation for rendered medical services to the health institution (1 and 3). Organizations of compulsory health insurance need to pay established compensation for rendered medical services to health institutions (2). The health institution is obliged to issue a bill to the patient on the prescribed form, that is, invoice to the organizations of compulsory health insurance for provided health services. The health institution is required to keep record of concluded contracts additional work outside of regular working hours. In its financial plan has to present and manage separatelly the funds accrued through additional work in accordance with the Law. Health workers, health associates, and other employees in health institution derive rights from the mandatory social insurance.

According to the Guidelines on method, procedure and conditions for performing additional work by health workers in health institution (Off. Gazette of RS, no. 108/2008), health institutions may organize additional work of employed health workers on the basis of the Plan for additional work. The Plan must be adopted by the Head of health institution at the proposal of the Expert Council of the health institution. The Ministry of health determines whether the health institution fulfills the Health Act regulations and the conditions for organizing additional work. If the Ministry, determines that the institution does not meet the requirements for performing additional work, and that the plan does not ensure the realization of the Act's objectives and tasks, it will indicate to the institution on the deficiencies and determine a deadline for the fulfillment of these conditions.

RHIF does not conclude contract with HCIs for providing healthcare services in additional work, so therefore RHIF does not monitor or control this type of work in HCIs.

Revenues generated based on additional work are being shown in financial reports of HCIs as revenues from other sources of financing, since these type of revenues are not part of mandatory social insurance. Percentage and amount of these revenues cannot be separately seen from financial reports, since there is no specific account for them.
Also, there are no separate reports from HCIs to RHIF that are related to revenues generated via additional work.

3.3 Intermediary institutions

Key chapter points: ***Main intermediary institutions that help the functioning of Serbian healthcare system are Republic Health Insurance Fund, Pension and Disability Insurance Fund and Military Social Insurance Fund. In this chapter we have tried to decribe each of their roles with special attention given to RHIF and it's financial analysis in the last three years, as it is the most important institution for regulation of financial flows in the system.***

3.3.1 Republic Health Insurance Fund

The National Health Insurance Fund of the Republic of Serbia is a national, public and non-profit organization ensuring the exercise of health insurance rights. The Health Insurance Fund is a legal entity, and the organization responsible for providing compulsory health insurance. Health Insurance Fund provides necessary funds for exercising the rights deriving from compulsory health insurance mainly by payment of health insurance contributions by insurers and employers. In this way, citizens of the Republic of Serbia finance their healthcare by mediation of the Serbian Health Insurance Fund. The National Pension and Disability Insurance Fund provides insurance for pensioners. Military Social Insurance Fund provides insurance for military insurers, and also, one portion of incomes is being transferred from the Budget of the Republic of Serbia.

All citizens generating income (salaries, pensions, fees…) are legally bound to pay health insurance contributions. Health insurance contributions for citizens who do not generate income and who cannot be insured as family members of persons generating income are paid from the budget of the Republic of Serbia.

The Serbian healthcare system is based on the principles of equality and solidarity. Citizens pay health insurance contributions as a percent and in proportion to their income and financial capacity, while healthcare services are used according to their needs.

Rights, obligations and responsibility of the National Health Insurance Fund are governed by the Law on Health Insurance and the Articles of Association of the National Health Insurance Fund of the Republic of Serbia. Incomes of RHIF may only be used for purposes defined by the Law and that mainly refer to exercising the rights under compulsory health insurance coverage and improving the national health insurance system.

In the total revenues generated by RHIF in previous years, the most significant portion comes from health insurance contributions, around 2/3, while the remaining 1/3 comes from transfers from the Republic Budget and other organizations of compulsory health insurance.

Persons that have own basis for the insurance are insurance carriers for themselves, but also for members of their families that do not have other basis for health insurance.

Below table shows total number of insurance carriers and dependent members for each category of insurance basis in 2014, according to RHIF data.[22]

Table 9: Total number of insurance carriers and dependent members in 2014

Basis for the insurance	Number of insured persons	Insurance carriers	Dependent members
Employed persons	2,810,877	1,660,392	1,150,485
Unemployed persons receiving fees	65,078	47,589	17,489
Pensioners	1,956,987	1,728,001	228,986
Self-employed	278,905	158,923	119,982
Farmers	283,721	154,734	128,987
Budget insured	**1,370,593**	955,408	415,185
Other	174,798	140,448	34,350
TOTAL:	**6,940,959**	**4,845,495**	**2,095,464**

As seen from the above table, the number of persons insured from Republic Budget is almost 20% of beneficiaries of mandatory social insurance. This percentage is considered to be very large, especially when having in mind financial (un)sustainability of the system.

Financial analysis of the Republic Health Insurance Fund will be shown through analysis of main revenues and expenses and analysis of financial results in the previous three years. Analysis of main revenues and expenses shows us what are the main sources of incomes and what is their trend for the observed period.

Incomes of RHIF are consisted of:

- Contributions for mandatory social insurance
- Premiums of VHI organized by RHIF
- Funds assets
- Domestic and international loans
- Other assets in accordance with the Law

Funds of RHIF can be used only for purposes determined by the Law:

- For exercising the rights of insured persons for mandatory health insurance
- For improving the healthcare system
- For excersising the rights of insured persons from VHI organized by RHIF
- For settling all expenses deriving from provision of health insurance
- For other expenses in accordance with the Law

From total incomes of RHIF the majority (98,32% in 2014) consists of three main categories:

- Social contributions (67,59% of total income):
  - Social contributions paid by employers (47,07% of total contributions);
  - Social contributions paid by employees (45,38% of total contributions);

[22] Source: http://www.eng.rfzo.rs/index.php/about

  - Social contributions for self-employed and unemployed persons (7,45% of total contributions);
- Transfers between budget organizations of MSI (26,18% of total income):
  - 97% of these transfers are transfers from the Republic PDIF for health insurance of retired citizens;
  - Remaining 3% are mainly contributions from the National Employment Service for unemployed citizens
- Transfers from other levels of authorities – Republic Budget (4,55% of total income):
  - In 2014. main part of these transfers (68%) were budget transfers due to reduction of contribution rate for health insurance from 12,3 to 10,3%.
  - Remaining part of these transfers consists of remunerations for temporary inability for work due to pregnancy complications, for healthcare of persons suffering from rare diseases and for certain legal entities upon Government decision. In 2012. and 2013. a small portion of these transfers included transfers for „tobacco fee“, which have been canceled in 2014.

For the purpose of this analysis it is important to point out that in 2014, 26,18 % of three major income categories come from PDIF, a fund with high deficit in previous years without possibility for financial recovery in the near future. In the previous years this share was around 29% which shows a negative trend when it comes to inflows arriving from PDIF.

When it comes to expenses, they are mainly consisted of expenses raised from rights on usage of health insurance (i.e. social insurance and social security rights), employee expenses and other expenses:

- Expenses deriving from rights on usage of mandatory health insurance contribute with 98,33% to total expenses and represent the amount of money transferred to public healthcare institutions. These expenses, amon other hings include RHIF's remunerations for sick leaves and travelling expenses for trips related to excersising the right to health cre, and are consisted of:
  - Hospital expenses – expenses for secondary and tertiary level of healthcare in the amount of 112,062 mill RSD (50,88% of total RHIF expenses);
  - Primary healthcare expenses in the amount of 44,062 mill RSD (20,27% of total RHIF expenses);
  - Prescription medicines issued to RHIF insured persons in the amount of 29,274 mill RSD (14,16% of total RHIF expenses);
  - Providing dental services to RHIF insured persons in the amount of 4,890 mill RSD (2,05% of total RHIF expenses);
  - Providing dialysis services to RHIF insured persons in the amount of 4,246 mill RSD (1,93% of total RHIF expenses);
  - Remunerations for orthopedic devices, services of Institute for Public Health, sending insured persons for treatments abroad and other healthcare services contribute in total expenses with approximately 10% all together;
- Operating expenses contribute with 1,52% in total expenses and they consist of:
  - Employee expenses – payroll (1,21%)
  - Use of goods and services (0,31%)
  - Interests (0,01%)
- Other expenses consist mainly of fines, fees and penalties, damage compensations and other, and contribute to total Fund expenses with approximately 0,11%.

Social contributions, transfers between budget organizations of MSI and transfers from Republic budget cover 99% of expenses deriving from rights on usage of mandatory health insurance in 2014. and 101% both in 2013. and 2012. RHIF had a negative EBITDA in 2014. of RSD 4,340 mill, and a positive EBITDA in previous two years that amounted RSD 2,544 mill in 2013. and RSD 3,971 mill in 2012. We can see a negative trend in the EBITDA growth rate. It fell in 2013. compared to 2012, while in 2014. total expenses were greater than total incomes. This financial result is due to constant expense growth and significant decrease of incomes in 2014.

In previous years transfers from the Republic budget were low compared to 2014. (RSD 1,213 mill in 2012. and RSD 932 mill in 2013). In 2014. initial budget transfers were planned in amount of RSD 668 mill, but the Republic budget rebalance at the end of 2014. planned RSD 14,035 million, twenty times more than initially planned. Actual transferred amount in the end of 2014. was 9,915 million RSD. Main reason for the increase in the amount of budget transfers lies in the reduction of contribution rate for health insurance from 12.3% to 10.3%.

PDIF, as the other main source of funding has its own funding issues as well. Budget transfers represent 45% of PDIF's total income (budget transfers were RSD 261,295 mill and total income was RSD 584,303 mill in 2013). Transfers from Pension and Disability Insurance Fund to Republic Health Insurance Fund amounted RSD 55,220 mill in 2014, RSD 57,908 mill in 2013, and RSD 55,068 mill in 2012.

Table 10: Financial overview of RHIF main incomes and expenses[23]

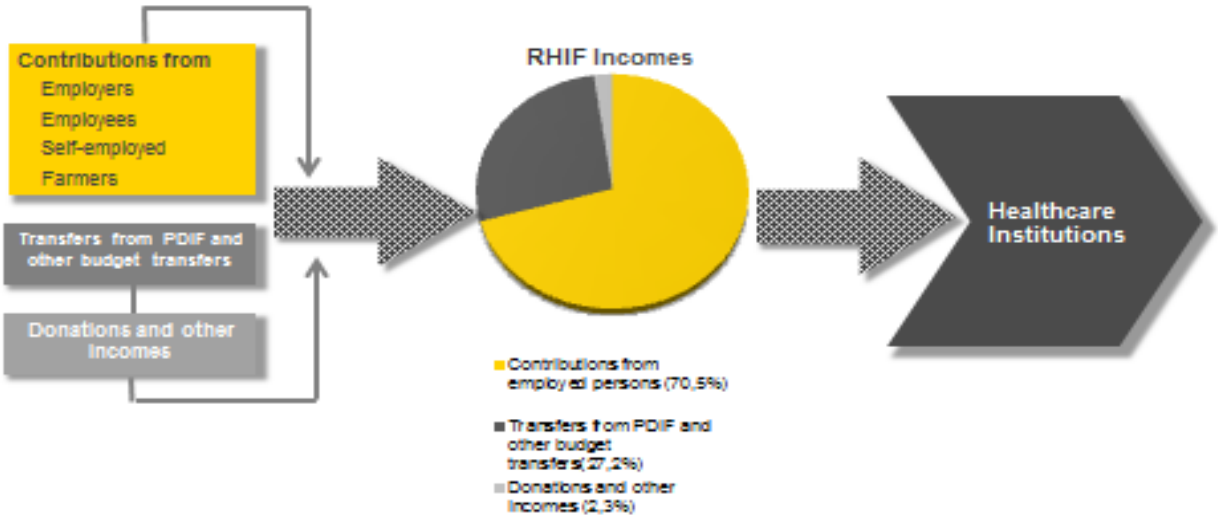
In '000 RSD

REPORT ON THE EXECUTION OF FINANCIAL PLAN OF REPUBLIC HEALTH INSURANCE FUND FOR 2014, 2013 and 2012	1.1.2013-31.12.2014			1.1.2013-31.12.2013			1.1.2012-31.12.2012		
	Budgeted	Actual	%	Budgeted	Actual	%	Budgeted	Actual	%
INCOMES AND EARNINGS (total)	220.384.444,00	217.704.001,00	98,78%	228.344.000,00	221.210.249,00	96,88%	212.805.337,00	213.649.777,00	100,40%
Current incomes	**146.400.000,00**	**147.142.133,00**	**100,51%**	**161.100.000,00**	**154.642.719,00**	**95,99%**	**148.000.000,00**	**147.567.404,00**	**99,71%**
Social contributions	146.400.000,00	147.142.133,00	100,51%	161.100.000,00	154.642.719,00	95,99%	148.000.000,00	147.567.404,00	99,71%
Donations and transfers	**14.035.322,00**	**9.915.107,00**	**70,64%**	**1.045.048,00**	**931.505,00**	**89,14%**	**1.345.048,00**	**1.213.478,00**	**90,22%**
Transfers from other levels of authority	14.035.322,00	9.915.107,00	70,64%	1.045.048,00	931.505,00	89,14%	1.345.048,00	1.213.478,00	90,22%
Other incomes	**1.910.052,00**	**2.881.578,00**	**150,86%**	**2.851.911,00**	**2.881.338,00**	**101,03%**	**1.312.205,00**	**2.745.460,00**	**209,22%**
Property income	1.500,00	1.335,00	89,00%	900,00	615,00	68,33%	105,00	204,00	194,29%
Revenues from sales of goods and services	708.092,00	1.485.102,00	209,73%	1.821.511,00	1.842.786,00	101,17%	607.100,00	1.506.706,00	248,18%
Mixed and indefinite income	1.200.460,00	1.395.141,00	116,22%	1.029.500,00	1.037.937,00	100,82%	705.000,00	1.238.550,00	175,68%
Memoranda items for refund of expenses	**895.000,00**	**775.202,00**	**86,61%**	**1.180.000,00**	**1.030.733,00**	**87,35%**	**662.945,00**	**966.970,00**	**145,86%**
Memoranda items for refund of expenses	895.000,00	775.202,00	86,61%	1.180.000,00	1.030.733,00	87,35%	662.945,00	966.970,00	145,86%
Transfers between budget users at the same level	**57.143.000,00**	**56.989.125,00**	**99,73%**	**62.163.441,00**	**61.722.242,00**	**99,29%**	**58.820.852,00**	**58.491.551,00**	**99,44%**
Transfers between organizations MSI	57.143.000,00	56.989.125,00	99,73%	62.163.441,00	61.722.242,00	99,29%	58.820.852,00	58.491.551,00	99,44%
Income from sale of non-financial assets	**570,00**	**444,00**	**77,89%**	**3.000,00**	**1.259,00**	**41,97%**	**2.500,00**	**2.867,00**	**114,68%**
Income from sale of fixed assets	570,00	444,00	77,89%						
Income from sale of non-financial assets				3.000,00	1.259,00	41,97%	2.500,00	2.867,00	114,68%
Income from borrowings and sales of financial assets	**500,00**	**412,00**	**82,40%**	**600,00**	**453,00**	**75,50%**	**450,00**	**710,00**	**157,78%**
Income from sale of financial assets	500,00	412,00	82,40%	600,00	453,00	75,50%	450,00	710,00	157,78%
The unspent funds from previous years							**2.661.337,00**	**2.661.337,00**	**100,00%**
The unspent funds from previous years							2.661.337,00	2.661.337,00	100,00%
EXPENSES AND EXPENDITURES (total)	- 224.744.444,00	- 220.229.034,00	97,99%	- 224.744.000,00	- 218.668.829,00	97,30%	- 212.805.337,00	- 209.677.897,00	98,53%
Current expenses	**- 3.742.375,00**	**- 3.353.533,00**	**89,61%**	**- 3.765.164,00**	**- 3.600.698,00**	**95,63%**	**- 3.963.125,00**	**- 3.814.585,00**	**96,25%**
Expenditures for employees	- 2.708.275,00	- 2.658.719,00	98,17%	- 2.814.000,00	- 2.774.308,00	98,59%	- 2.964.153,00	- 2.952.408,00	99,60%
Use of goods and services	- 1.014.000,00	- 675.401,00	66,61%	- 946.064,00	- 823.205,00	87,01%	- 993.872,00	- 860.377,00	86,57%
Repayment of interest and associated costs of borrowing	- 20.100,00	- 19.413,00	96,58%	- 5.100,00	- 3.185,00	62,45%	- 5.100,00	- 1.800,00	35,29%
Donations, grants and transfers	**- 15.000,00**	**- 12.002,00**	**80,01%**	**- 13.000,00**	**- 12.682,00**	**97,55%**	**- 10.448,00**	**- 10.182,00**	**97,45%**
Other grants and transfers	- 15.000,00	- 12.002,00	80,01%	- 13.000,00	- 12.682,00	97,55%	- 10.448,00	- 10.182,00	97,45%
Social security and social protection	**- 220.586.500,00**	**- 216.556.556,00**	**98,17%**	**- 220.513.185,00**	**- 214.727.836,00**	**97,38%**	**- 208.543.435,00**	**- 205.701.836,00**	**98,64%**
Social security rights (OMSI)	- 220.586.500,00	- 216.556.556,00	98,17%	- 220.513.185,00	- 214.727.836,00	97,38%	- 208.543.435,00	- 205.701.836,00	98,64%
Other expenses	**- 247.069,00**	**- 236.730,00**	**95,82%**	**- 234.515,00**	**- 219.192,00**	**93,47%**	**- 80.541,00**	**- 68.738,00**	**85,35%**
Other expenses							- 6.000,00	- 2.450,00	40,83%
Taxes, duties taxes and penalties	- 41.000,00	- 37.880,00	92,39%	- 32.500,00	- 24.794,00	76,29%	- 22.500,00	- 19.962,00	88,72%
Fines and penalties according to the Court's decision	- 198.569,00	- 191.381,00	96,38%	- 194.815,00	- 190.592,00	97,83%	- 52.000,00	- 46.286,00	89,01%
Damage compensation for damage caused by state auth.	- 7.500,00	- 7.469,00	99,59%	- 7.200,00	- 3.806,00	52,86%			
Damage compensation damage caused by elementary disasters or other natural causes							- 41,00	- 40,00	97,56%
Expenditure of non-financial assets	**- 153.500,00**	**- 70.213,00**	**45,74%**	**- 218.136,00**	**- 108.421,00**	**49,70%**	**- 207.788,00**	**- 82.556,00**	**39,73%**
Fixed assets	- 153.500,00	- 70.213,00	45,74%	- 218.136,00	- 108.421,00	49,70%	- 207.788,00	- 82.556,00	39,73%

In the above table, only main groups of incomes and expenses are shown. Detailed overview of RHIF incomes and expenses per each group can be found in the appendix.

[23] Source:http://www.rfzo.rs/index.php/about/2015-02-10-09-49-53/finizv

Picture 13: Inflows and outflows into and from RHIF budget



3.3.2 Pension and Disability Insurance Fund (PDIF)

Pension and Disability Insurance Fund has been established pursuant to the Law on Pension and Disability Insurance. Its' main purpose is executing rights from pension and disability insurance and providing funds for executing these rights. The fund is a legal entity that provides pension and disability insurance for all persons who are, by Law, compulsory insured and covered by this insurance, regardless of their employment status (employed, self-employed, or farmers); determines the basis for paying contributions in accordance with the Law; provides for dedicated and economical use of resources; provides direct, efficient, reasonable and lawful execution of rights ensuring from pension and disability insurance, organizes activities for implementation of the insurance; controls registration for insurance, as well as all data necessary for obtaining, using and discontinuance of rights; organizes and implements pension and disability insurance, in accordance with the Law; performs international agreements; pays out pensions, reimbursements and other entitlements; and performs other duties in accordance with the Law and Statute of the Fund.

According to their own data, PDIF had about 1,847 million insured in 2014, from the following categories:[24]

- employed – 1,467,000;
- self-employed – 231,000;
- insured farmers – 149,000 ;

Number of pensioners in the same year was about 1,739 million, from the following categories:[25]

- former employees – 1,454,000
- retired self-employed individuals – 77,000
- retired farmers – 208,000

[24] http://pio.rs/images/dokumenta/statistike/2014/GODISNJI%20BILTEN%202014.pdf
[25] Ibidem

PDIF Incomes consist mainly of two parts:

- Social contributions of employed and military insurers (53.65% of all current incomes in 2013);
- Intergovernmental money transfers (44.68% of all current incomes in 2013).

According to PDIF Financial reports for 2013. total revenues were 584,842 billion RSD. Contribution rate for Pension and Disability Insurance was 24% in total. Total expenditures for 2013. were 586,485 billion RSD of which the main part (98.66%) was spent for pensions and other rights that arise from mandatory social insurance. Now we can see that in 2013. expenditures overcame incomes in the amount of 1,643 billion RSD which is approximately EUR 13,7 million.

PDIF gets the main portion of its revenues through pension insurance contributions. However, contributions participated in total revenues with only 49.97% in 2012. and 53.65% in 2013. Estimated participation of contributions during 2015. will be 60.19% according to PDIF Financial Plan for 2015. Huge deficit of PDIF was covered with transfers from the Republic Budget, which contributed to total revenues with 48.22% in 2012. and 44.68% in 2013. Estimated transfers in 2015. will be 37.97% of total revenues in 2015. according to PDIF Financial Plan for 2015. Other revenues consist of incomes from financial assets (e.g. shares of privatized companies which PDIF received in accordance with Ownership Transformation Law from 1997) and non-financial assets.

One of the main issues that affect Fund's financial stability is a low pensioners/insured ratio. This is mainly a consequence of high unemployment rate, together with negative demographic trends. Combination of these two factors causes extremely low ratio number of pensioners/number of insured. This ratio in 2014. was only 1.0:1.1 (1,739 million pensioners/1,847 million insured). By comparison, this ratio in 1999. was 1.0:1.8 (1,498 million pensioners/2.634 million insured). By categories of pensioners and insured, the best ratio is in case of entrepreneurs (self-employed) and it was 1.0:3.0 in 2014. (77 thousand pensioners/231 thousand insured). Such good coverage of pensioners with number of insured people is a consequence of private sector (especially SME sector) expansion after beginning of transition in 1989, while private entrepreneurs were of marginal importance in the time of the socialist economy. In the main category (employed people) ratio in 2014. was 1.0:1.0 (1,454 million pensioners/1,467 million insured), so it is clear that the vast majority of PDIF deficit comes from this category. Finally, the smallest ratio is in category of farmers – only 1.0:0.7 (208 thousand pensioners/149 thousand insured). The main reasons for such low ratio are small collection rate of contributions and demographic factors (reduction of rural population).

Estimation of PDIF is that minimal ratio for sustainability of pensions financing would be 1:3.

3.3.3 Military Social Insurance Fund (MSIF)[26]

Military Social Insurance Fund (MSIF) is a legal entity that has a status of organization that provides mandatory social insurance among which mandatory health insurance rights are also being achieved as well as material security of the beneficiaries pursuant to the Law that describes health insurance of military insurers. Fund is an organizational unit of the Budget and Finance sector in the Ministry of Defense of the Republic of Serbia.

[26] Financial reports of MSIF are not publicly availlable, so EY Belgrade was not able to conduct a more detailed analysis.

3.4. Public Healthcare providers

Key chapter points: ***Based on inspection of summarized financial reports for all public healthcare institutions we have identified that out of the total 346 institutions covered by the analysis, 197 have presented budget surplus totaling RSD 4,888,693 thousand. Budget deficit was reported in 146 institutions in the amount if RSD 851,739 thousand.***

3.4.1 Basic performance indicators and financial business results

Basic financial performance indicators in 2013. and 2014, summarized for all public health institutions in Serbia are presented in the following table.

Table 11: Basic performance indicators[27]

In '000 RSD

Description	Amount		Index
	2013	2014	
CURRENT INCOME AND INCOME FROM SALE OF NON-FINANCIAL ASSETS	**236,272,913**	**227,223,193**	**96.17**
CURRENT INCOME	189,320,481	187,615,890	99.10
Income from sale of non-financial assets	46,952,432	39,607,303	84.36
CURRENT EXPENSES AND NON-FINANCIAL ASSETS EXPENDITURES	**232,560,272**	**223,186,239**	**95.97**
Current expenditure	191,519,128	188,329,356	98.33
Non-financial assets expenditures	41,041,144	34,856,883	84.93
OPERATING RESULT SURPLUS OF REVENUE AND EARNINGS – SURPLUS	**3,712,641**	**4,036,954**	**108.74**
Surplus of revenue and earnings – surplus	4,673,290	4,888,693	104.61
Lack of revenue and earnings – deficit	960,649	851,739	88.66
CORRECTING SUFICIT OR DEFICIT OF REVENUES AND INCOME	**1,906,786**	**2,425,634**	**127.21**
COVERAGE OF EXPENDITURE FROM CURRENT REVENUE AND EARNINGS	57,966	60,159	103.78
SURPLUS OF REVENUE AND EARNINGS – SURPLUS	5,680,125	6,553,085	115.37
LACK OF REVENUE AND EARNINGS – DEFICIT	116,735	150,656	129.06
SURPLUS OF REVENUE AND EARNINGS – SURPLUS	**5,561,461**	**6,402,429**	**115.12**

Observed at the level of the entire Health system, the reported surplus was significantly higher than the deficit.

In the 2014, healthcare institutions in Serbia achieved a cumulative surplus of revenue and earnings ie. budget surplus in the amount of RSD 4,036,954 thousand (2013 – surplus of revenue and earnings ie. budget surplus amounted RSD 3,712,641 thousand).

In the 2014, healthcare institutions in Serbia achieved a cumulative surplus of revenue and earnings ie. budget surplus in the amount of RSD 4,036,954 thousand (2013 – surplus of revenue and earnings ie. budget surplus amounted RSD 3,712,641 thousand.

[27] Source: Healthcare institutions chamber of commerce: Analysis of financial reports of Healthcare institutions in Serbia

Of the total covered 346 institutions, 197 presented budget surplus totaling RSD 4,888,693 thousand (171 institutions in 2013. in the amount of RSD 4,673,290 thousand), while the budget deficit was reported 146 institutions in the amount of RSD 851,739 thousand (164 health institutions in 2013. in the amount of RSD 960,649 thousand). Balanced business was reported by 3 medical institutions (2 institutions in 2013).

3.4.2 Regular Income and Income From Sale of Non/Financial Assets

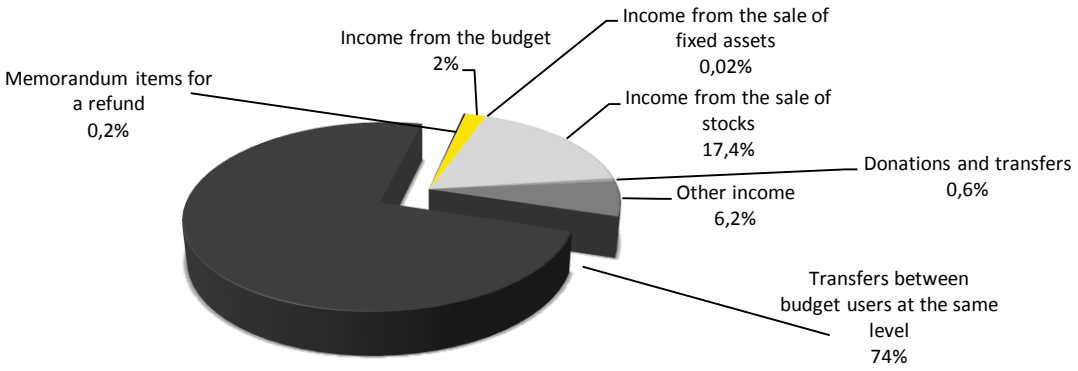
Regular incomes and revenues from sale of non-financial assets in 2013. and 2014, for all health institutions of Serbia, by types of revenues and earnings, are summarized in the table below.

Table 12: Current incomes and revenues from sale of non-financial assets[28]

In '000 RSD

Description	2013		2014		Index
	Amount	Share %	Amount	Share %	
CURRENT INCOME AND REVENUES FROM SALE OF NON-FINANCIAL ASSETS	**236,272,913**	**100.00**	**227,223,193**	**100.00**	**96.17**
CURRENT INCOME	**189,320,481**	**80.13**	**187,615,890**	**82.57**	**99.10**
Donations and transfers	1,407,955	0.60	1,332,452	0.59	94.64
Other income	13,864,352	5.87	14,172,052	6.24	102.22
Memorandum items for a refund	3,267,499	1.38	333,802	0.15	10.22
Transfers between budget users on the same level	167,210,750	70.77	167,269,072	73.61	100.03
Arrivals from the budget	3,569,925	1.51	4,508,512	1.98	126.29
REVENUES FROM SALE OF NON-FINANCIAL ASSETS	**46,952,432**	**19.87**	**39,607,303**	**17.43**	**84.36**
Revenue from sale of fixed assets	39,111	0.02	37,740	0.02	96.49
Revenue from sale of inventories	46,913,321	19.86	39,569,563	17.41	84.35

Picture 14: Structure of regular income and revenues from sale non-financial assets in 2014.



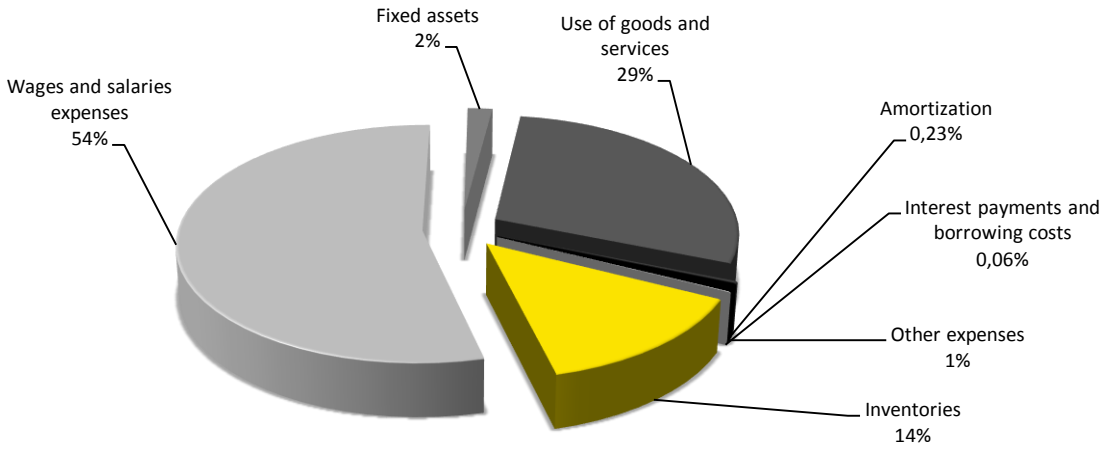
[28] Source: Healthcare institutions chamber of commerce: Analysis of financial reports of Healthcare institutions in Serbia

3.4.3 Current Expenditures and Expenditures for Procurement of Non-Financial Assets

Table 13: Current expenditure and expenses for procurement of non-financial assets[29]

Description	2013		2014		Index
	Amount	Share %	Amount	Share %	
CURRENT EXPENDITURES AND EXPENDITURES FOR PROCUREMENT OF NON-FINANCIAL ASSETS	**232,560,272**	**100.00**	**223,186,239**	**100.00**	**95.97**
CURRENT EXPENDITURES	**191,519,128**	**82.35**	**188,329,356**	**84.38**	**98.33**
Expenditure for employees[30]	126,805,963	54.53	120,866,273	54.15	95.32
Use of goods and services	63,317,914	27.23	64,592,963	28.94	102.01
Amortisation	588,612	0.25	510,924	0.23	86.80
Interest costs and related costs of borrowing	113,604	0.05	95,379	0.04	83.96
Other unmentioned expentidures	693,035	0.30	2,236,817	1.00	322.76
EXPENDITURES FOR PROCUREMENT OF NON-FINANCIAL ASSETS	**41,041,144**	**17.65**	**34,856,883**	**15.62**	**84.93**
Expenditure for sale of fixed assets	3,896,958	1.68	4,084,242	1.83	104.81
Expenditure for sale of inventories	37,144,186	15.97	30,772,641	13.79	82.85

Picture 15: Current expenditure and expenses for procurement of non-financial assets in 2014.



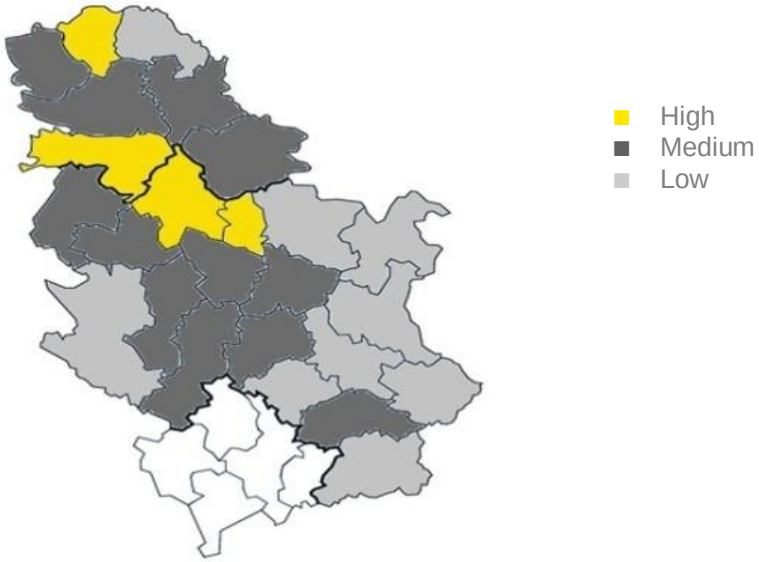
[29] Source: Healthcare institutions chamber of commerce: Analysis of financial reports of Healthcare institutions in Serbia

3.4.4 Expenditures for employees

Expenditures for employees for all public health institutions amounted 120,866,273 thousand RSD which is 54.15% of total current expenditures and expenses for non-financial property. Compared to 2013, the real terms of expenditure for employees is lower by 7.37%, while the nominal level is lower by 4.68%.

Monthly average gross salary per employee collectively for all health institutions in Serbia in 2014. amounted to RSD 65,944. Compared to the previous year (RSD 65,144) was nominally higher by 1.27% and in real terms lower by 1.58%.

Picture 16: Public healthcare institution debts:



Source: The Institute for Public Health of Serbia, Dr Milan Jovanovic Batut, 2011

IV Public Health System Financial Sustainability High Level Assessment

4.1 Assessment of sustainability

***Key chapter points:** The main conclusion of this part of the Document is that healthcare system in Serbia is not financialy sustainable, due to the fact that there are constantly present inflows i.e. transfers from Republic budget.*

If we think about healthcare system in terms of sustainability it would need to be a system which can survive independently without inflows from the Republic budget, a system with positive net result, respectively covering all expenses from regular operating income, a system with investments and long term going concern perspective. Strong sustainability meaning that all forms of capital must be maintained or enhanced, in order to benefit future generations, as well as to provide short-term benefits for development.

Serbian healthcare has been severely under-funded for many years and consequently, the standard of public healthcare available is generally of lower quality than in other EU countries. Unlike other countries in the region, Serbia has a history of financing healthcare via a national insurance scheme. The state therefore possesses great knowledge and experience in handling contracts and payments and holds extensive data on insurers. The RHIF, however, suffers from administrative inefficiency, as the numerous branches across Serbia lack ndependence and are tied to performing tasks that should be carried out centrally.

Total amount of inflows from Republic Budget is presented in Table 14. Having in mind earlier mentioned facts about sustainable system we can conclude that healthcare system in Serbia is not financialy sustainable, due to the fact that there are constantly present inflows from Republic budget.

Table 14: Healthcare system funding from Republic Budget

(In 000 RSD)

Transfers	2012	2013	2014
1. Republic Budget → RHIF	1,213,478	931,505	9,915,107
1.1. Budget Transfers for health care of individuals (Article 22 of the Law)	615,048	563,794	984,679
1.2. Budget transfers for tobacco fee	534,015	247,058	/
1.3. Budget transfers for individuals suffering from rare medical conditions	64,415	120,653	335,321
1.4. Budget transfers for premature maternity leave due to health issues	/	/	1,260,000
1.5. Budget transfers for certain legal entities upon Government decision	/	/	605,107
1.6. Budget transfers due to reduction of contribution rate	/	/	6,730,000[31]
2. Republic Budget → PDIF → RHIF[32]	23,051,600	27,230,275	23,780,416
3. Republic Budget → MSIF → RHIF	***Unable to calculate***		
TOTAL	**24.265.078**	**28.161.780**	**33.655.523**

31 Source: Republic Health Insurance Fund Finacial Reports for 2012/2013/2014 http://www.rfzo.rs/download/FINANSIJSKI_IZVESTAJ_ZA_2014.pdf

32 Note: Estimation

As presented above, budget transfer comes from three sides:

- Directly from Republic Budget into RHIF
- Indirectly from Republic Budget into PDIF, and then into RHIF
- Indirectly from Republic Budget into PDIF, and then into military healthcare institutions

Republic Budget into RHIF

As presented in the table 14, we can see that money transfers from the Republic Budget into RHIF have increased more than 10 times in 2014. This increase is a result of reduction of contribution rate from 12.3% to 10.3%, which lead from less inflows from contributions, and that, consequently had to be replaced with increased transfers from the Republic Budget. Amount of transfers from the Republic Budget due to reduction of contribution rate is RSD 6,730,000,000 or approximately EUR 56 million.

Republic Budget into RHIF through PDIF

The largest share in total transfers have the indirect transfers which come to RHIF through PDIF. Huge deficit of PDIF was covered with transfers from Republic Budget, which contributed to total revenues with 48.22% in 2012, 44.68% in 2013. and 41,86% in 2014. According to PDIF Financial Plan for 2015, estimated transfers will be 37.97% of total revenues in 2015.

Since we were not able to obtain precise data and calculations from PDIF and RHIF in order to see what is the exact amount of indirect transfers to RHIF from the Republic Budget through PDIF, for the purpose of this analysis we made an assumption that each type of expense is covered from the Republic budget inflow by 48,22% in 2012, 44.68% in 2013. and 41,86% in 2014. We used these specific percentages because they are the percentages of coverage of total PDIF inflows via transfers from the Republic Budget in the last three years. Using these assumptions, transfers from PDIF to RHIF, which are uncovered with pension insurance contributions, in 2012. totaled RSD 23,05 billion, in 2013. RSD 27,23 billion and RSD 23,78 billion in 2014.

Republic Budget into RHIF through MSIF

During our research we were unable to obtain data about MSIF, and therefore we were unable to calculate the amount of indirect budget transfers to RHIF that go through this institution. MSIF financial data are not publicly available, and we were not able to reach these information via meetings and interviews conducted with institutions that took part in our research.

4.2 Analysis of relationships between stakeholders in healthcare system in Republic of Serbia

Key chapter points: ***In this chapter we tried to analyse relationships between all key stakeholders in Serbian healthcare system. RHIF is being financed mainly through health insurance contributions. Direct income from employed citizens contributes with 71% of total RHIF income. One of the main findings is that, According to the Tax Administration data at the end of 2012, total uncollected contributions for health insurance were RSD 148.774.877.000 of which RSD 70.649.959.000 were uncollectible. Donations to HCIs in 2014. totaled in the amount of RSD 299,053,000. RHIF concludes agreements for approving appropriations to healthcare providers (primary, secondary and tertiary care institutions, military HCIs and pharmacies) on an annual basis. In primary health care a Capitation model for paying emlpoyees is being used and it represents a combination of fixed salary as a major part and a smaller variable performance-based part of earnings. Citizens have the possibility to conclude additional private health insurance with insurance companies or RHIF, but the share of VHI premiums is only about 2%.***

On the picture in Appendix 2 we can see relationships between all actors in healthcare system in Republic of Serbia. All relationships and transactions have a specific influence on the healthcare system. In the following sections we have tried to present each of the significant relationships, its current state and all inefficiencies.

4.2.1 Health insurance contributions and Republic Health Insurance Fund

Based on the Republic Law on mandatory social security contribution (“Official Gazette RS”-number 84/04, 61/05, 62/06, 5/09, 52/11, 101/11, 47/13, 108/13, 57/14, 68/14) contributions for public health insurance are paid into the Republic Health Insurance Fund by employees, employers, the self-employed and farmers.

Employees and other payers pay an amount of 10.3% of gross salaries (contribution rate). Contributions in 2012 accounted for a share of 69.07% in total RHIF budget, while in 2013 that share was 69.9%. In the last three years the amount of contributions was largely stable in absolute and relative terms.

Republic Health Insurance Fund is financed mainly from healthcare contributions. Direct income from employed citizens contributes with approx. 71% of total RHIF income.

There are different factors that have the influence on the amount of inflow to RHIF from the contributions:

- Number of employees
- Gross salary
- Effectiveness of contribution collection
- Contribution rate

Number of employees

Republic of Serbia has a very high unemployment rate. This factor is observed as an external factor due to the fact that this is a systematic problem.

Total number of employed persons in Serbia declined from 1.889 million in 2009 to 1.698 million in 2014, or for 10.1%. According to the Ministry of Finance data, in 2014 there were 767 thousand actively unemployed people or as much as 31.1% of total workforce. That means that many unemployed people are insured as spouses of employed people who, together with dependent children, represent a heavy burden for RHIF.

However, insufficient level of employment is not the only factor which negatively affects the total amount of contributions.

Gross salary

Average salaries in the period 2009-2014 had a real growth of only 2%. It becomes indicative that strong economic growth is necessary for the possibility of significant growth of gross salaries and paid contributions on that basis. For the purpose of this study, this can also be observed as an external factor. Currently, average monthly net salary in Serbia (44,530 RSD or 379.6 EUR) achieves only 49.8% of average net salary in the Czech Republic.

Effectiveness of contributions collection

Due to large scale of financial indiscipline and lack of liquidity in Serbian economy, enterprises and entrepreneurs have very high level of debt to RHIF for unpaid contributions.According to World Bank data uncollected contributions represented up to 40% of RHIF revenues in 2013. According to the Tax Administration data at the end of 2012, total uncollected contributions for health insurance were RSD 148.774.877 of which RSD 70.649.959 is uncollectible. The data is shown in below table.

Table 15: Uncollected health insurance contributions during the period 2008-2012 [33]

Year	Uncollected health insurance contributions (in 000 RSD)	Middle exchange rate of EUR as at 31.12.	Uncollected health insurance contributions (in 000 EUR)
2008	43.267.792	88,3352	489.814
2009	31.348.468	95,6011	327.909
2010	21.142.086	105,1817	201.005
2011	36.264.728	102,0973	355.198
2012	70.649.959	113,7183	621.272

Source: Tax Administration (uncollectible portion of health insurance contributions)

Contribution rate

Since August 1 2014, health contribution rate decreased from 12.3% to 10.3% of gross salary. This is one of the main reasons that has caused the planned transfers from Republic Budget of 668 million RSD to increase to actual 9.9 billion RSD.

[33] *EY Belgrade was unable to receive data for 2013 and 2014 from Tax Administration*

4.2.2 Contributions and Pension and Disability Insurance Fund

Based on the Republic Law on mandatory social security contribution ("Official Gazette RS"-number 84/04, 61/05, 62/06, 5/09, 52/11, 101/11, 47/13, 108/13, 57/14, 68/14), these contributions are paid into the Pension and Disability Insurance Fund. This income consists of payments made by employees and their employers as pension contributions regulated by Law and transfer from the budget as a result of deficit in Pension and Disability Insurance Fund.

However, contributions participated in total revenues of PDIF with 49.97% in 2012 and 53.65% in 2013. Estimated participation of contributions during 2015 will be 60.19% according to PDIF Financial Plan for 2015.

Different factors influence the amount of inflow to PDIF from the contributions:

- Number of employees
- Gross salary
- Effectiveness of contribution collection
- Contribution rate

All these factors are considered in relationship between individuals and RHIF and are similar to relationship between individuals and PDIF. Number of employees and average gross salary remain the same, while the only difference is a higher contribution rate for PDIF compared to contribution rate for health insurance, therefore these factors will have higher impact on total amount of contribution.

Effectiveness of contribution collection

As, previously noted, there is a high level of unpaid contributions in Serbia. Tax Administration was unable to provide us with the exact data on the number of companies which have debt to PDIF in 2014, neither with the amount of total debt for unpaid contributions in 2014. In several occasions Government covered large gaps in contributions which were not paid for a period of several years in many non-privatized companies. There are still companies under the process of privatization and restructuring, that have huge debts for pension insurance contributions.

Contribution rate

Since August 1 2014 contribution rate has increased from 24% to 26% of gross salary.[34] This caused an increase of 5.44 billion RSD in PDIF revenues from contributions, according to Revision of the Republic Budget for 2014.[35]

Although pension insurance contribution rate has increased from 24% to 26%, it must be taken into account that large problems with pensions financing occurred after a large decrease of this rate in 2002 (from 32% to only 19.6%). For example, in 1999 share of

[34] The Law on mandatory social insurance contributions, "Official Gazette of RS", no. 84/04, 61/05, 62/06, 5/09, 52/11, 101/11, 47/13, 108/13, 57/14, and 68/14

[35] http://www.parlament.gov.rs/upload/archive/files/lat/pdf/zakoni/2013/4174-13Lat.pdf and http://www.mfin.gov.rs/UserFiles/File/zakoni/2014/Predlog%20rebalansa%20budzeta%202014.pdf

contributions with incomes from financial and non-financial assets in total revenues was 80.6% while share of the Republic Budget transfers was 19%. In 2002 share of contributions and incomes from assets decreased to 54.9% while share of transfers from Budget increased to 42.1%. This structure of PDIF revenues remained similar until today. Before 2002 contribution rate was very high and Government intended to increase competitiveness of Serbian labor force and total economy by reducing it, but this decision made PDIF budget unsustainable in the long terms. If contribution rate would increase from current 26% to 32%, total revenues from contributions would increase for 100,934.28 mill RSD (860.41 mill EUR) or 32.17% of social contributions revenues, 38.63% of the Republic Budget transfers and 2.6% of GDP.

Issue identified: Ineffective and inefficient contributions collection

Recommendation: Tax Administration needs to identify amount of unpaid contributions and companies that are have debts for unpaid contributions. Estimate collectible and uncollectible part. Write off the uncollectible amount. Develop a specialised database of contribution payers with the option for flagging payers that are in debt for the purpose of better monitoring of the regularity of payments in future.

4.2.3 Republic Health Insurance Fund and Pension and Disability Insurance Fund

Purpose of incomes from Pension and Disability Insurance Fund of the Republic of Serbia is to cover health insurance for retired citizens of Republic of Serbia.

In 2014 these transfers totaled 470.89 million EUR (9.3% of total PDIF expenditures and 1.42% of GDP.

We were unable to obtain an thorough explanation of the correlation between these two institutions, the calculations based on which the amount of transferred funds from PDIF to RHIF is being determined and what has the biggest influence to money flows between these two institutions.

4.2.4 Donations and Republic Health Insurance Fund

Besides contributions for health insurance, Republic Health Insurance Fund has also other revenues consisted of transfers from the Republic Budget and donations. However, donations are merely occasional and not financially important type of income for RHIF. There were not any donations during 2012. 2013. and 2014. In May 2015 RHIF has concluded an Agreement with National Bank of Serbia on donation intended for 1.200.000 personalized health identity cards for helping socially vulnerable categories of citizens of the Republic of Serbia. Planned price per one health identity card is 3,55 EUR (VAT included) which means that the donated amount is supposed to be 4.260.000 EUR.

When it comes to donations to specific healthcare institutions RHIF does not monitor this type of incomes per HCI separately. All HCIs that are part of the Network Plan that have concluded agreements on financing health protection are obliged to submit the Report on

Budget execution to RHIF for the period from 01.01. to 31.12. which is an integral part of annual reports of HCIs. This Report contains information on the donated amounts, but does not contain information on types of donations (monetary, equipment, medical supplies… etc).

Amount of donations to healthcare institutions in 2014 (without military HCIs) is given in the below table.

Table 16: Donations to HCIs in 2012, 2013 and 2014

Type of Donation	2012 (RSD)	2013 (RSD)	2014 (RSD)
Foreign country donations	**18.912.000**	**6.350.000**	**27.743.000**
Current foreign country donations	**10.701.000**	**6.350.000**	**27.363.000**
Capital foreign country donations	**8.211.000**	**0**	**380.000**
Donations and help from international organ.	**147.840.000**	**67.592.000**	**59.864.000**
Current donations from international organizations	**147.840.000**	**67.592.000**	**59.430.000**
Capital donations from international organizations	**0**	**0**	**434.000**
Volontary transfers from legal entities and individuals	**228.245.000**	**307.597.000**	**211.446.000**
Current volontary transfers from legal entities and individuals	**189.034.000**	**279.159.000**	**199.707.000**
Capital volontary transfers from legal entities and individuals	**39.211.000**	**28.438.000**	**11.739.000**
TOTAL	**394.997.000**	**381.539.000**	**299.053.000**

4.2.5 Republic Health Insurance Fund and public healthcare institutions

RHIF can be observed as a mediator between actors who are funding the Healthcare system with actors who need money to provide services (healthcare institutions). System operates in a way that it directs significant share of all inflows in healthcare system directly through RHIF, and RHIF than allocates money to healthcare institutions. Republic Health Insurance Fund is the predominant source of funding for public healthcare institutions. The insurance scheme is designed to provide universal coverage.

RHIF concludes contracts on providing health services with public health institutions for a specific period of time that is included in Financial Plan of RHIF, at least for one year. Institutions submit Work Plans to RHIF for defined period, in accordance with standards of Public Health Institute of Serbia Dr. Milan Jovanovic Batut.

Each institution has an annual business plan with the planned amount of all services to be provided. RHIF provides funds for each institution according to plan and pays them to the institution in 24 installments (twice a month). RHIF determines, according to the regulations, funds for each institution on an annual level by types of costs (salaries, sanitary and medical supplies, medicines, energy sources). Each institution is obliged to prepare a report on actual number of provided services during the year. This report is being compared to the plan, and serves as a basis for monthly invoicing. Institution prepares an electronic invoice that is to be sent to RHIF. Invoiced amount is calculated on the basis of the actual number of provided services during the year and the price list determined by RHIF. If the invoiced amount is smaller than the amount of funds received according to plan, than the remaining amount is being considered as an advance payment and is being transferred to budget for next year or it can be required to return these funds back to RHIF . The regulations set a maximum level

of funding for each type of expenses. If the invoiced amount is slightly larger than the planned one RHIF may grant it and transfer additional funds to the institution, but if the difference is significant, RHIF disputes it in most cases.

RHIF approves appropriations to healthcare providers based on pre determined agreements for agreed purposes, based on a document that is being prepared on a yearly basis for the period from January to December. Responsibilities of healthcare institutions deriving from agreeements concluded with the RHIF are:

- Within its regular activities, healthcare institution is obliged to provide continuous delivery of health services in accordance with the work plan to insured persons Republican Fund.
- The health institution is obliged to refer the insured person to treatment in other healthcare facilities in case of not being able to provide specific types of services.
- The health institution is obliged to submit accurate data on the type, volume and value of services performed to insured persons, the consumption of medicines and medical equipment, inventories and any other information that are relevant for monitoring the implementation of this agreement, upon RHIF's request.
- The health institution is obliged to conduct continuous monitoring and improvement of the quality of work in the healthcare institution in accordance with the general act on indicators of healthcare quality, in the process of execution of the work plan.
- The health institution is obliged to provide medical services to the insured within the working hours, and only the contracted health services, in accordance with the work plan.
- The health institution is obliged to provide medicines and medical devices which are defined as the right deriving from compulsory health insurance to the insured persons.
- The healthcare institution has no right to charge extra money for health services envisaged in the work, to the insured persons, except the determined amount of participation
- Health institutions can send the insured person who is hospitalized in the medical institution to other healthcare providers who perform activities in the secondary and tertiary level of healthcare with which the Republic Fund had concluded an agreement on the provision of healthcare, for providing diagnostic or other health services, in accordance with the general act regulating the manner and procedure of exercising the rights of health insurance.
- The health institution is obliged to submit reports on the implementation of the work plan quarterly and cumulatively for the previous period from the beginning of the year and by the end of the year to RHIF.
- The medical institution issues an invoice for provided Health Services in accordance with the instructions on invoicing which is an integral part of the contract.

These type of agreements are being concluded on an annual basis with primary, secondary and tertiary care institutions, military healthcare institutions, as well as with pharmacies.

RHIF controls the execution of the obligations under the contract agreement, as well as lawful and appropriate use of funds of compulsory health insurance transferred to healthcare facilities for exercising legal rights of insured persons.

Control is being conducted by an authorized employee of the RHIF by direct insight into the medical, financial and other documentation of healthcare institutions, in accordance with the law and the general act regulating the control of implementation of contracts concluded with healthcare providers.

In accordance with the concluded agreement, healthcare providers issue invoices for provided health services, medicines and medical devices. Each primary care institution sends two separate invoices. One for primary and the other one for dental care. Invoice consists of the following expenses:

- Reimbursement for earnings and other expenses. This amount consists of costs of earnings, employees transportation, energy, material and other costs and is approximately 84% of the total invoiced amount. Majority of theese costs are earnings, and RHIF finances only earnings of contracted employees. That means that each institution has an approved number of staff whose salaries can be financed from RHIF, while all the remaining employees (if any) need to be financed from institution's own revenues. This number of employees is being determined in human resources plan regulated by MoH. For payment of earnings RHIF applies quarterly evaluation of selected doctors. Selected doctors are general practitioners, gyneacologists and pediatricians that have been selected from patients as their personal physicians. Their score can range between 1-10 and based of selected doctors rating average all other medical and non-medical staff get an average rating. (E.g. If an average rating of all selected doctors in an instituton is 6, all other medical and non-medical employees will have rating 6).
- Costs of medicines
- Sanitary and medical supplies in primary care

<u>RHIF does not cover:</u>

- Expenses of salaries for non-contracted employees
- Expenses for non-standard dental services (where almost all dental services are being considered as non-standard)
- Costs of new equipment procurement
- Representation costs

Based on submitted Annual Reports on Budget Execution for healthcare institutions that belong to the Network Plan (withouth Military healthcare institutions), total expenditures for all HCIs in 2014 were 223.409.505.000,00 RSD. Other expenditures were 21.040.294.000,00 RSD. Based on this, we can see that the percentage of Other expenditures, i.e. all expenditures that are not being financed by RHIF in total expenditures of all HCIs amounts 13,89% in 2014.

RHIF also does not provide or mediate in providing any kind of donations that institutions have. Each institution prepares donation contracts directly with the donor without any interfearance from RHIF side.

Investment, equipment and maintainance are being financed from three separate sources. Health centres, pharmacy and clinical-hospital centres founded by the City receive investments from the City. The second way of investment financing is to finance them from own-generated incomes. The third way is to apply for one of the selected programs approved

by MoH and receive necessary funds this way. Investments in equipment and maintaining are predominantely provided by city or MoH (over 90%), and only partly from the health centers themselves. RHIF can cover expenses of private healthcare institutions only in specific conditions, for example in case of urgent treatment of persons insured by RHIF.

When it comes to employees, according to the Law on Healthcare, Minister of Health adopts Staff plan for all employees in healthcare institutions that belong to the Network plan, and this Staff plan is consisted of all individual Staff plans of healthcare institutions that are a part of the Network plan. Staff plan represents the maximum number of employees in all healthcare institutions from the Network plan, i.e. in every individual healthcare institution during one fiscal year. Staff plan contains data on total number of employees for which salaries are being provided from organizations of mandatory social insurance, as well as the number of employees for which salaries are being provided from other sources (non-contracted workers). Individual staff plans for each institution define for which staff structure it is necessary to gain approval from the Ministry of health – Committee for staff planning of healthcare institutions when renewing staff. Also, according to the Regulation on obtaining approval for new employment and additional work engagement for users of public funds it is also necessary to gain approval from the Committee for giving approvals for new employment and additional work engagements. Therefore, only salaries of contracted workers can be financed from the funds provided by RHIF, while all others need to be financed from other sources.

4.2.5.1. Capitation in Primary Healthcare

Capitation is a model for paying earnings in primary health care, depending on the number of insured persons who have registered or opted for individual physicians, It represents a combination of fixed salary (which is a major part) and a much smaller part that is variable and performance-based. That variable part of the doctors' salary is being calculated on the basis of four criteria:

- Registration – it refers to a number of patients that have selected a particular physician. This criteria acocunts for 40% of the total rating.
- Rationality – it refers to a total value of perscribed medicines per examined insuree. This criteria acocunts for 20% of the total rating.
- Prevention – takes into account the number of provided preventive examinations and screening tests to the patients that have opted for a specific physician. This criteria acocunts for 30% of the total rating.
- Efficiency – depends number of insurees' visits. This criteria acocunts for 10% of the total rating.

For all of the 4 criteria, a grade is being determined. Grades range between 0 and 10. Grade 5 represents an average, i.e. benchmark value for each criteria separately.

The total rating is the sum of ratings obtained based on the criteria in proportion to their share in the total rating. Healthcare facilities at the primary level of care are facilities in wich healthcare services are mainly being provided by general practitioners.Each physician has an assigned nurse/technician, and together they form a team. For nurses/technicians in a team, a percentage increase of basic salary based on performance is calculated in the same percentage as for the physician in that team.

Example: Doctor Petar Petrović has following grades for each criteria, respectively: registration = 7, rationality = 8, prevention = 10, efficiency = 9.

Final grade = 7*0,4 + 8*0,2 + 10*0,3 + 9*0,1 = **8,3**.

Work of chosen physicians/dentists in areas of general medicine, pediatry, gyneacology, child dental services and general dental services is being evaluated directly.For all other employees in primary care facilities, the salary part based on performance is calculated in the amount which represents an average increase of basic salary based on the performance of an employee in a medical institution.

Evaluation of physicians work has its legal foundations in a Decree on corrective coefficient, the highest percentage increase of basic salary, criteria and norms for the part of the salary that is being realized based on performance, as well as methods of salary calculation for employees in healthcare institutions („Official Gazette of RS“, no 46/13). Every three months, RHIF, on its website publishes new Capitation tables, which show performance of chosen physicians/dentists who are working on a primary level of healthcare in healthcare institutions from the Network Plan of Healthcare Institutions of Republic of Serbia.

Starting from October 2012, salaries of physicians/dentists in primary care have two parts:

- Basic (fixed) part
- Part based on performance

The intention of this evaluation of performance is to achieve significant improvement of percentage of registered insured persons, increase of preventive check-ups, increase of physicians interest in controling their performance, increasing of work transparency between employees and comparison among physicians and among healthcare institutions.

The goal of evaluation of performance through this method is not to make savings on payroll expenses, but rather to establish a more fair distribution of existing payroll funds among certain healthcare institutions on primary level of healthcare, so that employees with higher performance have higher incomes as well.

However, payment reforms have given little results, if any. Performance-based primary care payments for chosen doctors is modest, at the least. The reform itself is a major step towards introducing performance pay, but true capitation system still doesn’t exist in Serbia. Managers have little flexibility and incentives to rationalize staffing and service provision or improve quality of provided services.

4.2.6 Health insurance contributions and Military Social Insurance Fund (MSIF)

Based on the Republic Law on mandatory social security contribution ("Official Gazette RS"- number 84/04, 61/05, 62/06, 5/09, 52/11, 101/11, 47/13, 108/13, 57/14, 68/14), contributions for mandatory public health insurance are paid for military employees in the same manner as for all other employees in Republic of Serbia. The only difference is that in MDIF inflows come from military employees, while RHIF inflows come from all others professions, but the bases is the same – contributions are being calculated based on contribution rate and gross salary.

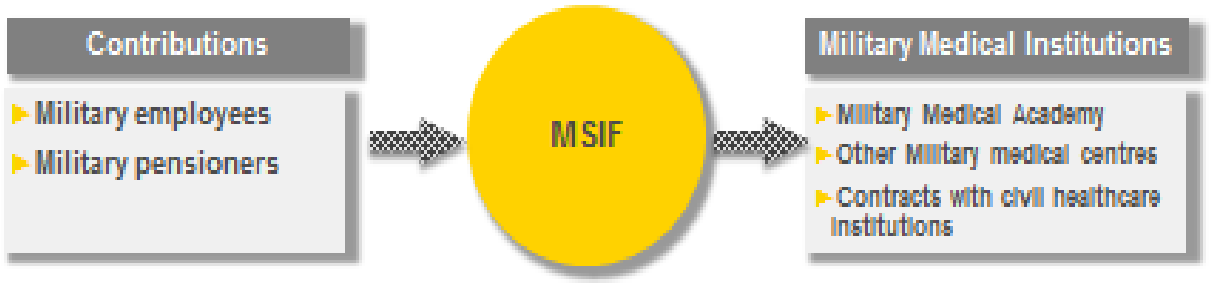
The main source of MSIF revenues are contributions for mandatory health insurance that are calculated based on the gross salary of professional military personnel and net military pensions and is being paid to the MSIF by the Ministry of Defense and by the Republic Fund for Pension and Disability Insurance

Different factors have influence on the amount of inflow to MSIF from the contributions:

- Number of employed military personnel
- Gross salary
- Effectiveness of contribution collection
- Contribution rate

Number of employees and gross salary will be observed as external factors due to the fact that this is a systematic problem. We were unable to obtain data about the amount of unpaid contributions for military insured, thus we were not in the position to estimate effectiveness of contribution collection. When talking about the contribution rate, as previously mentioned, the contribution rate for mandatory health insurance decreased from 12.3% to 10.3% and, as well as in all other cases, is being applied on salaries and military pensions as of 1 August 2014.

Picture 17: MSIF Revenues



4.2.7 Military Social Insurance Fund and Public military healthcare institutions

MSIF provides transfers to military healthcare institutions (Military Medical Academy and military medical centers). Also MSIF concludes contracts with many civil public healthcare institutions (primary healthcare centers, hospitals, pharmacies etc.).

According to the regulations in the field of healthcare and health insurance of military insured, the funds of mandatory health insurance are used to finance: supply of medicines, medical consumables, supplies and devices, medical and laboratory equipment for the needs of military medical facilities; and payment of the cost of treatment in civilian medical institutions in the country and abroad; payment of travel costs related to treatment in the country and abroad; payment obligations towards pharmacy institutions for medicines, medical supplies, orthopedic and other devices issued to military insured by certified recipes; payment of compensation for funeral expenses and mortal help for family members of military insured (the insurance carrier); payment of compensation to members of the Management and Supervisory Board of the MSIF, the work of the MSIF Professional Service etc.

4.2.8 Individuals to private insurance fund

Although there is a possibility for employed people in Serbia to conclude additional private health insurance contracts with insurance companies, share of private health insurance in total health insurance is extremely small. According to data of National Bank of Serbia, in third quarter of 2014 share of voluntary health insurance premiums in total premiums was only 2% (8.64 mill EUR or only 0.63% of RHIF revenues from social contributions in 2013), while in third quarter of 2013 that share was 1.8%. Health insurance premiums achieved nominal growth of 16.4%, but two thirds of these premiums in third quarter of 2014 were premiums of only two insurance companies.

The problem is that private health insurance can be taken only on a voluntary basis, which means that if someone has a private healthcare insurance policy, that person is still obligated to pay health insurance contributions to RHIF and be insured in public healthcare system. That is one of main reasons why share of private health insurance is very low in Serbia, and why instead of paying private health insurance policies, out of pocket expenses for healthcare are dominant in private healthcare expenses. Second main reason of low penetration of private health insurance is a relatively low living standards of citizens.[36]

4.2.9 Private insurance fund to private/public healthcare institutions

Private insurance fund have contracts with private healthcare institutions (and in very few cases with public HCIs) with the intention to sell private insurance policies to individuals. When individuals who have health insurance policy get in a need of medical services, they have the right to get medical care in those institutions they have chosen when they bought their health insurance policy. They can choose from one of the institutions that VHI company

[36] For example in 2012 in Serbia share of food and non-alcoholic beverages in total household expenditures was 42.9% while in Slovenia was 16.4%. Sources of information: http://webrzs.stat.gov.rs/WebSite/public/ReportView.aspx and http://pxweb.stat.si/pxweb/Dialog/viewplus.asp?ma=H276E&ti=&path=../Database/Hitre_Repozitorij/&lang=1

that has sold them the policy has concluded contracts with. When medical institution provides the service to an individual they charge private insurance fund for their services, and not to the individual who received medical care. Based on this, private healthcare institutions have inflows from private insurance fund. More details will be explained in a part of this Document dedicated to voluntary health insurance.

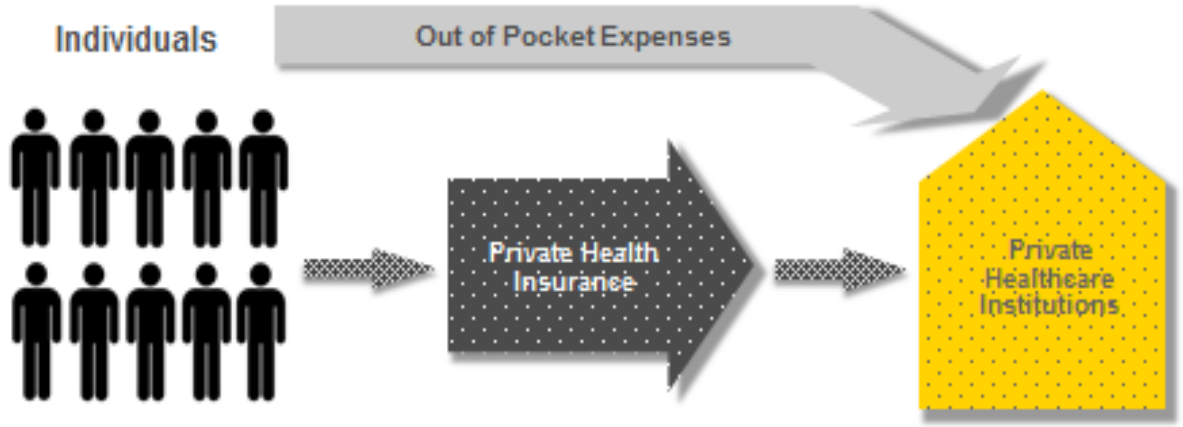
4.2.10 Individuals to Private healthcare institutions

Out of pocket expenses represent expenses that individuals pay directly to a healthcare provider and generally cannot be refunded by any third party.

As per RHIF there are two arguments in favor of this method of payment. The first one says that, especially in low income countries this can be an efficient way of collecting additional money that will be spent within the local community. The other argument says that by having out of pocket expenses people will reduce the use of unnecessary health services because they have to pay for them.

Out of pocket expenses are presented on picture 18 shown below, and are expressed as a percentage of total private expenditure on health. Share of out of pocket expenses in private expenditures is much higher than its share in the European Union. As we mentioned earlier, because of mandatory public health insurance and relatively low living standards in Serbia, private health insurance is still underdeveloped when compared to other EU countries and almost all private expenditures come from out of pocket expenditures.

Picture 18: Private Healthcare Funding in Serbia



V Financial Reporting and Controlling in Serbian Public Healthcare System

Public healthcare institutions are usually large organizations, with a large number of emloyees, multiple processes, different services and numerous users of those services. In order to conduct business succesfully, healthcare institutions need to run effective and efficient managerial and finance functions.

Although, there are many ways of effective managing of healthcare institutions, internal controls and risk management should be in the spotlight.

5.1 Financial reporting

Key chapter points: ***Healthcare institutions need to submit financial reports to RHIF . RHIF than consolidates the received reports and makes one consolidated report which is then submitted to Ministry of Finance.***

Based on the Decree on Budget Accounting („Official Gazette of RS“, no, 125/2003 and 12/2006), all healthcare institutions are obliged to prepare a Report on Execution of Financial Plans for the period from January to December and to submitt it to RHIF for the purposes of planning and control of execution of financial reports.

Healthcare institutions need to submit financial reports to RHIF until 10th of January in the following year. RHIF then consolidates the received reports and makes one consolidated report which is then submitted to Ministry of Finance – Treasury Department until the 20th of January.

Annual financial reports are being prepared on forms perscribed in the Rulebook on Methods of preparation and submmitng financial reports for budget funds users and mandatory social security organizations as follows:

- Form 1: Balance Sheet
- Form 2 Income Statement
- Form 3: Report on Captal Expenditures and Revenues
- Form 4: Cash Flow Report
- Form 5: Report on Budget Execution

Besides all above stated, together with the annual financial reports, healthcare institutions also need to submit:

- Reasons for discrepancies between approved funds and execution and
- Report on received donations and indebtedness on the domestic and foreign money and capital markets and executed debt repayments

And according to the RHIF instructions, HCIs also need to submit:

- Form 6: Report on Supplies
- Forms 7 and 7a: Report on Liabililities
- Form 8: Report on Receivables

5.2 Financial controlling

Key chapter points: ***Healthcare institutions have the obligation to submit an annual Report on Adequacy and Functioning of the Established System of Financial Management and Controlling. This obligation was fulfilled by 46 healthcare institutions during 2013, out of 340 of them. That means that 86% of healthcare institutions have not submitted theese annual reports. Ministry of Health does not conduct any type of financial controls in individual healthcare institutions nor in the system as a whole. The Ministry only monitors purpouseful using of funds transferred to individual HCIs based on concluded agreements with these institutions.***

Healthcare institutions are the carriers of healthcare protection, and as they are users of public funds, they must apply the Law on Budget System and they are obliged to establish financial management and controlling functions. They are also obliged to submit an annual Report on adequacy and functioning of the established system of financial management and controlling. This obligation was fulfilled by 46 healthcare institutions during 2013, out of 340 of them. That means that 86% of healthcare institutions have not submitted theese annual reports, which can be due to a lack of understanding the proper ways of conducting finance management and controlling functions.[37]

„If a healthcare institution has not named a working group, and a financial manager, and if there are no written procedures, that means that financial management and controlling system has not been implemeted in a way decribed in the Rulebook on common criteria and standards for establishing, fuctioning and reporting on the financial management and controlling system in public sector.[38]

There are no legal penalties for non-establishment of Financial management and controlling system, as well as for not submitting the Annual Report on Financial Management and Controlling.

Internal control should be a process inside an institution that will be conducted by the Managing Board, managers, as well as all other employees, designed in a way to provide a better goal achivement inside an organization. Internal controls / internal audit departments should provide a more efficient and effective operations, reliable financial reports, property protection and compliance with the Law.

Republic Health Insurance Fund controls the fulfillment of obligations from the concluded contracts with healthcare providers, as well as lawful and appropriate use of funds of compulsory health insurance transferred to the healthcare providers for exercising legal rights of insured persons.

[37] Source: Serbian healthcare institutions Chamber of Commerce, Report no.8, December 2013
[38] Source: Official Gazette of RS no 99/2011

The contractual relationship between the Republican Fund and healthcare providers emphasizes the obligation of purposeful spending of transferred assets, namely, for purposes assigned by the contract. Control of execution of contract with healthcare providers, among other things, includes control over lawful and purposeful use of funds of compulsory health insurance with the ultimate aim of introducing financial discipline and guidance of healthcare institutions towards using the funds of mandatory health insurance in compliance with laws and regulations, as well as to settle regular payments to suppliers.

The RHIF, in addition to controlling lawful and appropriate use of funds of compulsory health insurance, controls the exercise of rights related to the position and rights of insured persons, controls monitoring process over the healthcare as well as the fulfillment of contractual obligations in terms of the scope and content of the services provided, all of these in order to create the conditions that would enable insured persons to exercise rights from compulsory health insurance in an uniform manner and in accordance with applicable regulations.

Controlling of contracts concluded with healthcare providers includes following controls:

1. Regularity of the execution of contracts concluded between the RHIF or branch offices and healthcare service providers.

2. Lawful and appropriate use of funds of compulsory health insurance transferred to healthcare providers for exercising legal rights of insured persons.

3. Personal data relating to the state of health of the insured persons who are kept in the medical records of the insured persons in accordance with the Law.

Control of contracts with healthcare providers strictcly involves controlling of execution of health services from the Hospital Plan, services rendered to insured persons, number of employees, correctness of calculation and payment of salaries to employees, purposeful spending of funds transferred by contract for procurement of medicines, sanitary and other care materials, including implants, compliance of economic-financial documentation regarding the type and volume of services rendered and material consumption. In addition to the above mentioned, control of medical services includes control of personal data related to the state of health of the insured persons, who are kept in the medical records of the insured person, as well as the personal data of insured persons, related to exercising rights from the compulsory health insurance.

In accordance with Article 190 of the Law on Health Insurance while exercising controls, security supervisor that is in charge of conducting the control process may:

1. Determine that there are irregularities and shortcomings, as well as that the implementation of actions is against the Law and the contract concluded with the provider of health services, and are to be eliminated within a specified period of time;

2. Propose temporary suspension of transfer of funds, until the provider of healthcare services does not eliminate the irregularities in the execution of the contract concluded;

3. Propose termination of the contract with the chosen doctor;

3. Propose reduction of the amount of funds given to the healthcare provider for a part of the obligations that are undertaken by the contract, but are not fulfilled by the healthcare provider;

4. Propose termination of a part of the contract or the contract as a whole with the healthcare provider;

5. Take other measures in accordance with the Law and the contract concluded;

Control of contracts concluded with healthcare providers can be initiated on the basis of annual control plans, or on a special request on the initiative of the State authorities or RHIF.

While conducting the process of controls, RHIF cooperates with the relevant state authorities, inspection services and authorities that supervise the legality of work and make supervision of whether professional work is in accordance with the Law.

In the period between 1st of January 2015 and 30th of June 2015, 62 controls of purposeful spending of funds of mandatory health insurance were conducted. Out of the total number of organized controls, 5 controls of purposeful spending of compulsory health insurance funds were organized upon request, while 57 of them were organized in accordance with the Annual Controls Plan for 2015.

Controls brought to light some irregularities in the spending of purposeful funds for compulsory health insurance in 44 health institutions. Those irregularities mostly referred to:

- Misuse of funds of compulsory health insurance that were transferred for paying salaries to contracted workers. Some health institutions used the funds transferred by the Republic Fund in order to finance salaries for employees who are not within the agreed number and structure of employees.
- Incorrect calculation of the addition to the salary based on past work and on that basis, payment of increased salaries to employees from the mandatory health insurance funds. Salaries were calculated by applying coefficients which are not determined in accordance with the Regulation on the coefficients for the calculation and paying salaries to employees in public services.
- Misuse of funds of compulsory health insurance which are transferred for the purpose of transport of contracted workers.
- Misuse of funds of mandatory health insurance, which were transferred to a medical institution for one purpose, but they were spent for another. For example, some institutions used the funds which were transferred for paying costs of fuel and energy for paying incentives to employees, rather than for settling their liabilities to suppliers of energy resources. This is problematic because the simulation may not be financed from the funds of mandatory health insurance.
- Incorrect billing of drugs and medical devices. In the process of control it was found that some health institutions invoiced drugs and medical devices at prices that are higher than the purchase prices.

For the irregularities in the process of control in the amount of 343,660,091.05 RSD, insurance supervisors proposed the following measures:

- Respective institutions need to refund the amount of 83,429,933.41 RSD to the RHIF[39]
- Respective institutions need to transfer the amount of RSD 260.230.157,64 from the account of self-generated revenues onto the account for transfer of budget funds of health institutions

5.2.1 Role of Ministry of Health

We have identified that the Ministry of Health does not conduct any type of financial controls in individual healthcare institutions nor the system as a whole. The Ministry only monitors purpouseful use of funds transferred to individual HCIs based on concluded agreements with these institutions. Budgeted funds of MoH are being used exclusively for the purposes determined by the Law on Healthcare (Article 18) and include providing general interests of entire population in providing healthcare.

Funds for providing general interests of population are being transferred to MoH from the Republic budget, and than the Ministry transfers them to individual institutions. Ministry of Health receives financing instructions from Ministry of Finance, since the transferred funds are from the Republic budget. These instructons set the limit for financing and give basic economic guidelines for drafting the annual budget of MoH.

MoH publishes public invitation for applying for the programs stated in the Law on Healthcare (Article 18) by early July of the current year. Individual institutions are free to apply for some of these programs by the end of July. After that the Minister establishes a committee that sugests priorities from all submitted applications. Priority areas of financing are determined based on the as-is analysis of the current state and all submitted applications and a general rule is that the HCIs from most undevelopped areas have advantages in receiving funds for the stated purposes. The Department for Public Health and Prohram Healthcare gives it's approval on the selected applications and forms a working group for drafting the Budget.

Contracted funs are being transferred to HCIs in monthly installments and the MoH conducts controlling of the purpouseful use of transferred funds. If during these controls, any irregularities are to be detected, the institution where irregularities have been found has the obligation to return transferred funds to the MoH. Interesting thing is that MoH does not monitor any effects of investments made once they are sure that the transferred money has been spent for the intended purpose.

Issue identified: Low level of Financial Management and Controlling especially in public HCIs

Recommendation: Set financial KPIs, Propose regulatory framework for mandatory controlling functions; Make financial reporting uniform in both private and public HCIs.

****For more detailes se RECOMMENDATIONS part of this Document.*

[39] *Source: Republic Health Insurance Fund – Report on conducted controls from the period 01.01.-30.06.2015*

VI Private Healthcare Overview in Serbia

6.1 Participation of public and private healthcare in the overall health system of Serbia

Key chapter points: ***Total private insurance premium was EUR 6,858,602, which was EUR 514,011 more than in 2012. Voluntary health insurance in Serbia is still at the early stages of development. In 2010, the share of the voluntary health insurance in the total premium in Serbia was 1.81%.***

Private healthcare institutions can be founded by licensed unemployed physicians that have passed professional examination or physicians pensioners with compliance of Chamber of Healtcare WorkersThey can be found as ordinations of physicians or dentists (general and specialist), polyclinics, laboratories, pharmacies and infirmaries. Physicians who open their own institutions work as entrepreneurs, in accordance with the Law on business companies. They cannot perform activities in the areas of emergency care, blood and its derivatives supply, taking, keeping and transplantation of organs and parts of human body, production of serums and vaccines, autopsy and public health activities.

According to Law on Healthcare protection, (article 49), private healthcare institutions can provide only those services for which they are registered. They must fulfill several conditions for providing a certain type of activities:

- They need to have required profiles and number of healthcare workers, with passed professional examination and adequate specialization;
- They need to have adequate medical equipment to provide safe and professional service;
- They need to have suitable premises for performing healthcare activities;
- They need to have appropriate types and quantities of medicines which are necessary for performing certain kinds of healthcare activities.

More detailed conditions in sense of necessary professionals, equipment, premises and medicines for foundation of institution and performing a certain types of healthcare activities are prescribed by the Ministry of Health. The Ministry of Health brings the decision on fulfillment of conditions prescribed by the Law on Healthcare protection. On the basis of that decision, private institutions are recorded in the register of Business Registers Agency and can start with their business activities

Private institutions have certain obligations. They must provide emergency care to all citizens, to participate in prevention and suppression of infectious diseases if public entities demand so, to participate in protection and saving inhabitants in the case of elementary and other bigger disasters or emergencies, to organize and provide measures for disposal and destruction of medical waste, and to regularly submit medical-statistical reports and other records to responsible public healthcare institute in accordance with the Law on Healthcare protection.

Public health sector still has a far wider range of providing complex health services and diagnosis / treatment based on higher technology available than the one in private sector. Also, private healthcare institutions are usually much smaller and specialized in certain areas of medicine, while public clinics/hospitals in most cases provide a wider range of diagnosis and treatments. As private healthcare is covered through out-of-pocket expenses, the public health sector is dominant in providing health services. Private practice is mostly represented in Belgrade with more than one third of private healthcare service providers being based in Belgrade. Healthcare providers such as medical and dental practices and pharmacies are the most common private institutions. In primary and specialized healthcare, a total number of 2.6 million doctor visits were done in the private sector in 2014, compared to 0,84 million in 2011, which shows that there is a significant growth of using private health services in Serbia[40].

Total number of doctors in private HCIs in 2014 was 3.678, Pharmacists 2.591, and 3.360 nurses and technicians, according to data obtained from Association of Private Healthcare Institutions and Private Practices of Republic of Serbia, while public sector had 122.312 employees in total in all of the three categories.

Total private insurance premium was EUR 6,858,602, which was EUR 514,011 more than in 2012. Voluntary health insurance in Serbia is at the beginning of its development. In 2010, the share of the voluntary health insurance in total premium in Serbia was 1.81%.

Table 17: Number of private healthcare institutions in Serbia in 2014

Institution Type	Number
Health centers	18
Clinic centers and polyclinics	162
Specialized hospitals	74
General hospitals	14
Private practices	1.061
Dental practices	Approx. 2.500
Departments and Institutes	8
Home care	34[41]
Medical laboratories	199
Pharmacies	Approx. 1,500

Source: Association of Private HealthCare Institutions and Private Practices of Republic of Serbia

40 Source: Association of Private Healthcare Institutions and Private Practices of Republic of Serbia

41 Data are referring to 2011.

Table 18: Number of public healthcare institutions in Serbia

Description	2013	2014.
Primary care health centres	141	149
Pharmacies	40	40
Bureaous	17	16
General hospitals	24	28
Special hospitals for short-term hospitalization	8	8
Special hospitals for pulmonary diseases	3	3
Special hospitals for psychiatric diseases	5	5
Institutes/Special hospitals for rehabilitation and extensive treatments	24	24
Health centres	19	17
Clinical centres	4	4
Clininical - Hospital centres	5	5
Institutes	11	11
Clinics	5	5
Institutes for public health	24	24
Institutes for blood transfusion	3	3
Institute for Forensic Medicine	1	1
Institute for Antirabic protection	1	1
Institute of psychophysiological disorders and speech pathology	1	1
Institute of Occupational Medicine	1	1
Military Medical Academy	1	-
Military Medical Centre Novi Sad and Military Hospital Niš	2	-
Total:	**340**	**346**

Source: Analysis of financial reports if healthcare institutions for 2014, Healthcare Institutions Chamber of Commerce, May 2015

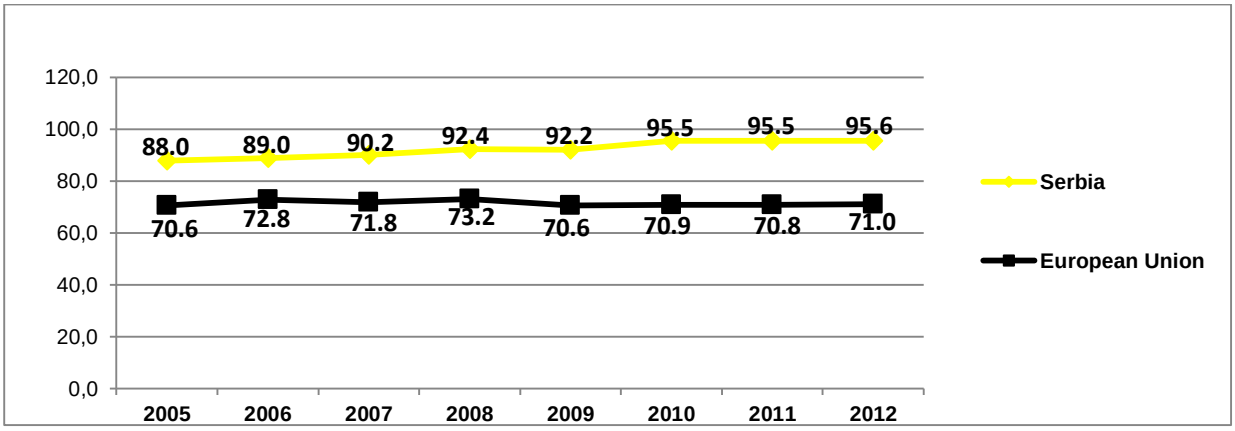
The general conclusion is that the private sector itself is expanding in Serbia, particularly in the field of dentistry. Even so, it still serves a smaller proportion of the population that can afford private health services. Services that are not covered by public health insurance may be supplemented by private health insurance. Some large companies operate a type of private insurance coverage, applicable to company-run healthcare centers.

6.2 Assessment of out of pocket payments in the health system

Key chapter points: ***In Serbia 51.6 % of population had expenditures on healthcare. Large portion of Serbian population claims it had spendings for procurement of medicines (80.7%). Greatest usage of services of private HCIs has been noticed among population that lives in Belgrade district and among those with college and university degrees.***

"*Out of pocket expenditure is any direct outlay by households, including gratuities and in-kind payments, to health practitioners and suppliers of pharmaceuticals, therapeutic appliances, and other goods and services whose primary intent is to contribute to the restoration or enhancement of the health status of individuals or population groups. It is a part of private health expenditure*" - World Health Organization National Health Account database.

Picture 19: Out of pocket expenses in Serbia as a percentage of private expenditure on health, compared to European Union



Source: World Health Organization, http://apps.who.int/gho/data/node.main.75?lang=en

1. General out of pocket expenses

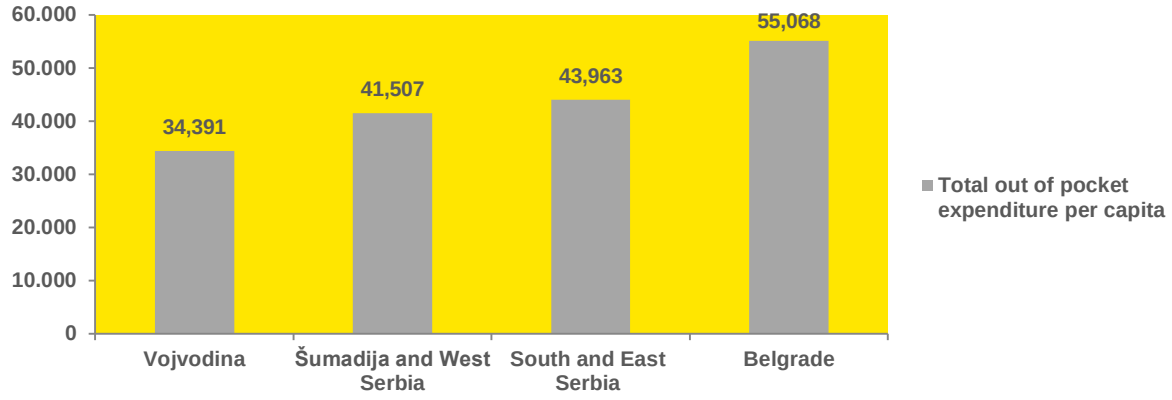
According to research conducted by Ipsos Strategic Marketing in 2014 main household expenditures on healthcare in Serbia are as follows:

During the 12 months, preceding the research in the year 2013, in Serbia 51.6 % of population had expenditures on healthcare (most of this was from South and East Serbia – 58.8%, while the Belgrade region had the lowest share – 48.4 %).

The average annual amount of total healthcare expenditure per capita was RSD 42,971. Largest annual expenditures were among the residents of Belgrade (RSD 55,068), while the smallest were in Vojvodina (RSD 34,391) (Picture 18).

The average annual amount of total healthcare expenditure per household member in 2013 was RSD 60,632. Share of expenditure for health services in total amount of healthcare „out of pocket" expenditures was 8.1 % in 2013.

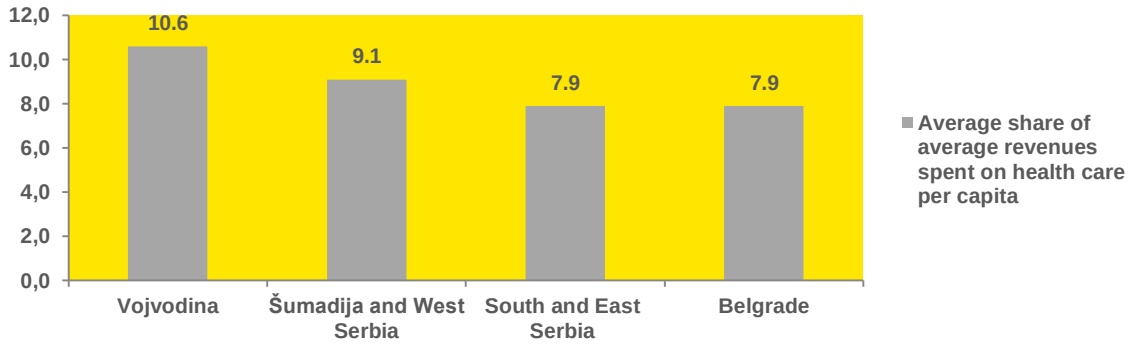
Picture 20: Average annual amount spent on healthcare per capita in 2013 (RSD)



Source: Ipsos Strategic Marketing; Research of health wellbeiing of citizens of Republic of Serbia, 2013

However, in South and East Serbia and Belgrade these spendings, observed as percentage of monthly salary, were much lower (7.9 % each), than in Vojvodina (10.6%) (Picture 21).

Picture 21: Share of average monthly expenses on healthcare per capita in 2013



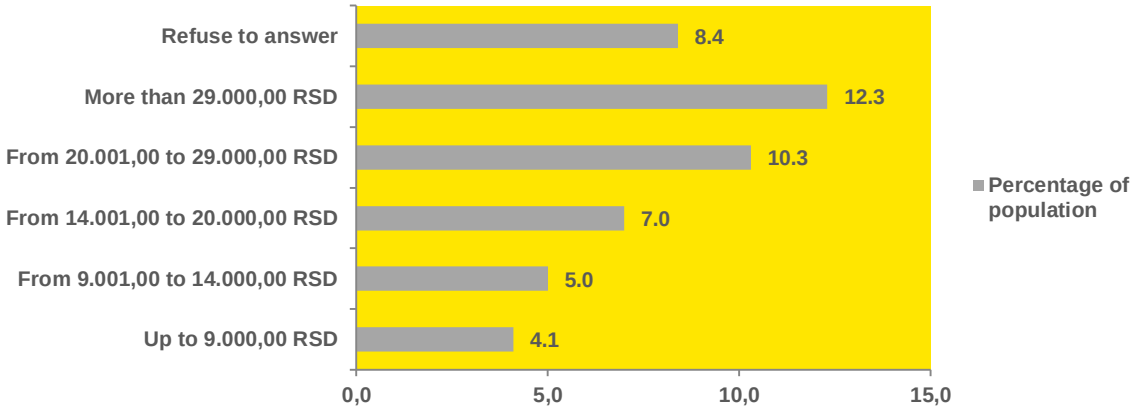
Source: Ipsos Strategic Marketing; Research of health wellbeiing of citizens of Republic of Serbia, 2013

2. Outpatient care:

When it comes to the part of population which had spendings for outpatient care in the past 4 weeks, from those that had any spendings on healthcare in the past 12 months, the situation is as follows: 4.8% of population went to see a doctor in a public healthcare institution, while 2.5 % of went to a private healthcare institution. When it comes to diagnostic services, these were requested from public healthcare institutions by the 3.8 % of population, and by 7.3% from the private healthcare institutions.

There are notable differences in using diagnostic services in private practice, between different income category households (Picture 22). High income category households are using these services considerably more often than low income category households.

Picture 22: Percentage of population which had spendings for diagnostics in private healthcare institutions, in 2013



Source: Ipsos Strategic Marketing; Research of health wellbeiing of citizens of Republic of Serbia, 2013

3. Dental Health Service

Expenditures for visits to the dentist in public institution, in 4 weeks before conducting the research, were recorded at 2.1% of population of Serbia. On the other hand, 7% of population went to see a private dentist. Private dental practice was significantly more often present in the high income category households.

4. Expenditures for medicines

Large portion of Serbian population claims it had spendings for procurement of medicines, in 4 weeks before conducting the research (80.7%). Spending for these purposes were mostly recorded in South and East Serbia (85.4%) and least frequently in Belgrade region (69.8%). Also, these expenditures considerably vary depending on the index of household wellbeing – these expenditures are quite more often (89.8 %) among those with lowest income, than among those with highest income (64.6 %).

In the same period, in average of 17.44% of Serbian population had to pay for auxiliary medicinal remedies, and it is similar for the expenditures on medicines – 20.5% (these expenditures were most often in South and East Serbia). However, unlike the spendings on medicines, spendings on auxiliary medicinal remedies are most ofthen among the high income category houshoulds (24.1%), and notably less often in the low income category households (9.7%).

5. Expenditures on alternative medicines

Expenditures on alternative medicine are stated by only 0.9% of population (slightly more than in 2006 – 0.5%), while another 2.4% of them claims, that in 4 weeks before conducting the research, it had expenditures on other costs of healthcare (in the 2006 level – 2.7%).

Hospital healthcare

In Serbia during the 2013, only 2.3% of population had expenditures on hospital health in public institutions and slightly less in private institutions (1.2%). Hospital treatment in private practise is considerably more often in Belgrade region (2.4%) and Vojvodina (1.7%) and among those households with high income (2.2%), than in other regions.

6. Use of outpatient healthcare

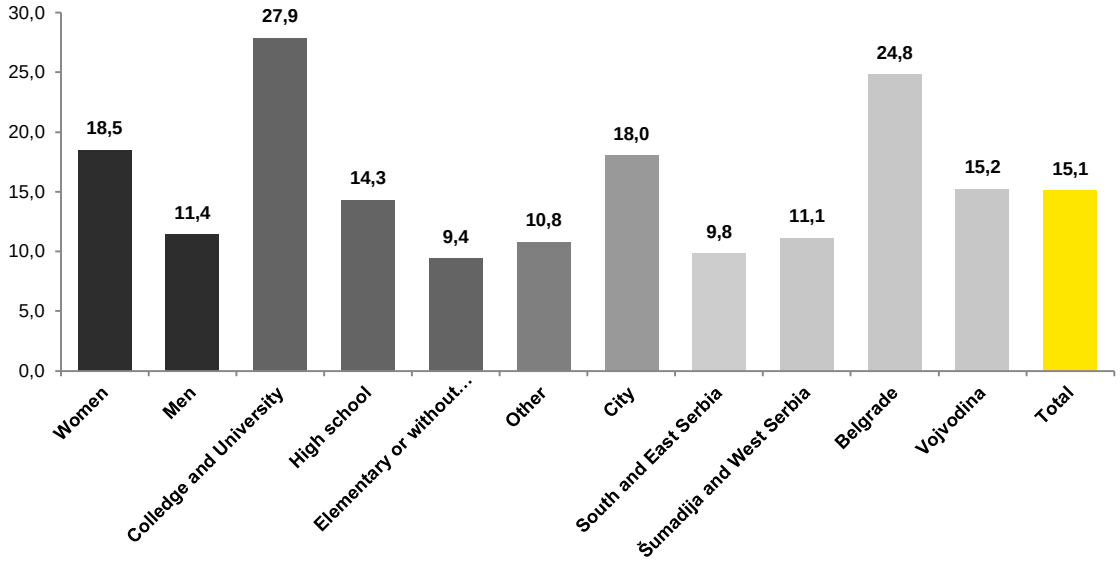
- *General practitioner and pediatrician*

In Serbia, 91.7% of population has its own general practitioner/pediatrician. The largest portion of population uses the services of a physician in public healthcare institutions (91%) while only 2.5% of population uses the services of a physician in private healthcare institution.The frequency of use of health services from general practitioner/pediatrician is slightly greater for highly educated residents (5.3%), residents wiht highest incomes (5%), residents of urban areas (3.1%) and residents of Vojvodina (3%).

- *Services of private institutions*

Healthcare services of private institutions during last year before the survey were used by 15.1% of Serbian inhabitants. These services were most frequently used by inhabitants of Belgrade, urban areas, women and highly educated persons.

Picture 23: Percentage of adult inhabitants which used healthcare services from private institutions in the period of one year before survey (2013), by sex, education level, type of settlement and region



Source: Ipsos Strategic Marketing; Research of health wellbeiing of citizens of Republic of Serbia, 2013

6.3 Comparison of Serbian Healthcare System With World's Best Practice

Key chapter points: ***When comparing these best practice systems with healthcare practice in Serbia, we need to pay attention to different categories: role of the government, the way the system is being publicly financed, role of the private insurance and system designed benefits. Diagnosis-related groups (DRG) represent the system of hospital services financing based on classifying hospital cases into one of originally 467 groups. It is a system based on a concept of controlling the costs of hospital care and treatments. All healthcare institutions on a secondary and tertiary level of healthcare have implemented the invoicing system in accordance with DRG system starting from 01 January 2014, which is the first of four phases of introducing the DRG system in Serbia.***

6.3.1 General Overview of World's Best Practices in the Domain of Healthcare

According to the Bloomberg's list of most efficient healthcare countries in 2014[42] in the top 20 among others belong Singapore, Italy, Japan, Australia, Israel, France, United Kingdom, Norway, Switzerland, Sweden.

Table 19: Top 20 most efficient health countries in the World in 2014

Rank 2014	Country	Efficiency score	Life expectancy	Healthcare costs as a % of GDP	Healthcare cost per capita ($)
1.	Singapore	78.6	82.1	4.5%	2,426
2.	Hong Kong	77.5	83.5[43]	5.3%	1,944
3.	Italy	76.3	82.9	9.0%	3,032
4.	Japan	68.1	83.1	10.2%	4,752
5.	South Korea	67.4	81.4	7.0%	1,703
6.	Australia	65.9	82.1	9.1%	6,140
7.	Israel	65.4	81.7	7.0%	2,289
8.	France	64.6	82.6	11.8%	4,690
9.	UAE	64.1	77.0	3.2%	1,343
10.	UK	63.1	81.5	9.4%	3,647
11.	Norway	63.0	81.5	9.1%	9,055
12.	Mexico	59.1	77.1	6.3%	618
13.	Ecuador	58.4	76.2	6.7%	361
14.	Spain	58.1	82.4	9.9%	2,808
15.	Switzerland	57.9	82.7	11.4%	8,980
16.	Saudi Arabia	57.8	75.5	3.1%	795
17.	Chile	55.5	79.6	7.2%	1,103
18.	Czech Rep.	54.1	78.1	7.7%	1,432
19.	Finland	53.3	80.6	9.3%	5,319
20.	Sweden	53.3	81.7	9.7%	4,232

Source: Bloomberg/most efficient healthcare countireis 2014

[42] Taken on 6/1/2015 from: http://www.bloomberg.com/visual-data/best-and-worst//most-efficient-health-care-2014-countries
[43] Yellow boxes represent top 5 countries per selected criteria: life expectancy, healthcare costs as a % of GDP and healthcare costs per capita

Table 20: Serbia's results comparing to top 20 most efficient health countries in the World

SERBIA	Efficiency score	Life expectancy	Healthcare costs as a % of GDP	Healthcare cost per capita ($)
Rank N/A	N/A	74,1	10,6%	632

Above are shown results for Serbia so we can compare our country to top 20 most developed World countries when it comes to healthcare. Although it may seem that healthcare costs as a % of GDP are high enough, we have to take into account that that is due to the fact that Serbian GDP is very low when compared to these countries.

Bloomberg's methodology[44] is as follows:

Each country is ranked based on three criteria: life expectancy (weighted 60%), relative per capita cost of healthcare (30%); and absolute per capita cost of healthcare (10%). Within each criteria, 80% of the score is derived from the most recent health-care system assessment and 20% comes from changes, if any, over the previous year. Countries are scored on each criteria and the scores are weighted and summed to obtain their efficiency scores. Included are countries with population of at least five million people, GDP per capita of at least $5,000 and life expectancy of at least 70 years.

Unsurprisingly, there is no one formula for success when it comes to efficient medical care. The systems that rank highly on Bloomberg's list are as diverse as the nations to which they belong. The unifying factor seems to be tight government control over a universal system.

Ranking fourth on Bloomberg's list, the Japanese system involves universal healthcare with mandatory participation funded by payroll taxes paid by both employer and employee, or income-based premiums by the self-employed. Long-term care insurance is also required for those older than 40. While most of the country's hospitals are privately owned and operated, the government implements smart regulations to ensure that the system remains universal and egalitarian.

Meanwhile, Singapore's healthcare system is largely funded by individual contributions, and is often hailed by conservatives as a beacon of personal responsibility. Private healthcare still plays a role in Singapore's system, but takes a backseat to public offerings, which boast the majority of doctors, nurses, and procedures performed.

Despite being considered by some as having the freest economy in the world, Hong Kong's universal healthcare system involves heavy government participation; Public hospitals account for 90% of in-patient procedures, while the numerous private options are mostly used by the wealthy.

When comparing these best practice systems with healthcare practice in Serbia, we need to pay attention to different categories: role of the government, the way the system is being

[44] Taken on 6/1/2015 from: http://www.huffingtonpost.com/2013/08/29/most-efficient-healthcare_n_3825477.html

publicly financed, role of the private insurance and system designed benefits (limits on cost participation and exemptions from paying for special categories of population)[45].

1. Government Role

When we look at the role of the government, Serbia healthcare system is most similar to Italian (rank #3). They both have obligatory national health insurance with centralized insurance fund, which cannot be opted out. Governments define the level of protection and control the funds. If we would look at differences it would differ most from Singapore (rank #1), whose main role is to regulate their health system, while the responsibility lies on residents.

2. Funds from public sector

Serbian healthcare system is mainly financed through contributions to the Republic Health Insurance Fund (RHIF). This system is perhaps most similar to French (rank #8) system of financing public healthcare where employer and employee payroll taxes amount for 64% and a national earmarked income tax for 16% of public expenditures.

3. Private insurance role

In Serbia the share of private health insurance in total health insurance is extremely small. (voluntary health insurance premiums in total premiums were little below 2% according to data from National Bank of Serbia; only 0.63% of RHIF revenues from social contributions in 2013). This situation is mostly influenced by the fact that the public insurance fund cannot be opt out. Therefore private insurance is available only as additional insurance. Again, this situation is most similar to the one in Italy where private health insurance accounts for roughly one percent of total spending in 2009, and around 15% of population buy complementary (services excluded from statutory benefits) or supplementary coverage (more amenities in hospitals, wider provider choice). On the other hand, Japan has a large number of people (around 70%) that hold private health insurance for protection against high out-of-pocket expenditures, particularly in case of hospitalization. Privately funded healthcare has been limited to services such as dental orthodontics and expensive artificial teeth, and treatments of traffic accident injuries. These treatments, however, are usually paid for by compulsory and/or voluntary automobile insurance.

4. System designed benefits

In Serbia there is a yearly limitation for paid participation, amounting one half of the insured person's monthly salary or pension, paid-out in last month of the previous year. For those insured, but without income, this limitation amounts for one half of average net salary in the Republic of Serbia, paid-out in last month of the previous year.[46]

Cost sharing does not include paid participation for implants, medical devices, medical-technical aids and participation for the medicines that are on the List of medicines.

Japan has coinsurance monthly limitation of 80,100 yen [USD 774], depending on enrollee age and income. It also has annual cap of total OOP payments at between JPY 310,000 [USD 2,997] and JPY1.26M [USD 12,180] per household, depending on income and ages of

[45] Taken on 6/1/2015 from: http://www.commonwealthfund.org/~/media/files/publications/fund-report/2015/jan/1802_mossialos_intl_profiles_2014_v7.pdf

[46] Source:http://www.paragraf.rs/propisi/pravilnik_o_sadrzaju_i_obimu_prava_na_zdravstvenu_zastitu.html /Regulations about the content and scope of rights to healthcare from the compulsory health insurance and co-payments for 2015; Article 36.

household members. On the other hand there is Singapore, where there is absolutely no cap on cost sharing since this it has a dominantly private insurance system.

In Serbia children, future mothers, persons with disabilities, 65+ years old, students until 26 year, people in lowest income category and other endangered categories of population are exempt from paying participation for health expenses[47]. People in the lowest income category are considered those with less than minimal amount of net salary increased by 30%[48] (RSD 21,160 or USD 212,149 + 30% = USD 275,73).[50] It is most similar to the Italian system where there are exemptions for low-income older people/children, pregnant women, chronic conditions/ disabilities, rare diseases. In Singapore on the other hand there are subsidized care for low-income population, with income- and asset-based means-test to target subsidies. Special fund called Medifund, serves as safety net to pay for low-income and people with no means to pay for their healthcare bills.

6.3.2 EHCI – Euro Health Consumer Index

The Health Consumer Powerhouse Ltd is a Sweden-based private company that monitors and benchmarks healthcare systems of 37 countries, including all 27 EU Member States. HCP is probably the most influential private actor in this field, though the level of data comparability and reliability is open to many criticisms.

HCP collects 48 indicators, grouped in 6 categories:

1. Patient rights, information and e-Health (12)
2. Accessibility (6)
3. Outcomes (8)
4. Range and reach of services provided (8)
5. Prevention (7)
6. Pharmaceuticals (7)

Every year since 2005 Health Consumer Powerhouse publishes a report on “EuroHealth Consumer Index”, in which it presents an overall analysis, as well as a ranking, both general and for each category. The last report presented on the web refers to 2014. In this report Serbia took 33rd place with 473 points.

[47]Source:http://www.paragraf.rs/propisi/pravilnik_o_sadrzaju_i_obimu_prava_na_zdravstvenu_zastitu.html Regulations about the content and scope of rights to healthcare from the compulsory health insurance and co-payments for 2015; Article 23.
[48]Source:http://www.paragraf.rs/propisi/pravilnik_o_sadrzaju_i_obimu_prava_na_zdravstvenu_zastitu.html Regulations about the content and scope of rights to healthcare from the compulsory health insurance and co-payments for 2015; Article 25.

[50] Source: http://www.pses.org.rs/statistika/Minimalna%20zarada%20za%20period%20Jul%20-%20Decembar%202014.%20godine.pdf Paragraph 2 of Article 111 of the Labor Law

6.3.3 Diagnosis-Related Groups – DRGs

Diagnosis-related groups (DRG) represent the system of hospital services financing based on classifying hospital cases into one of originally 467 groups. It is a system based on a concept of controlling the costs of hospital care and treatments. This system identifies a large number of similar groups taking into account:

- Type of health problem (diagnosis, condition and a need for care)
- Outcome of the treatment and care
- Method of treatment (intervention, procedure, drug treatment...)
- Benefit of treatment
- expected future health status
- and the costs of treatment and care[51]

The core of the DRG system is the healthcare "product" supplied by a hospital care of a patient. The initial architects of the DRG system established 23 major diagnostic categories (MDCs) as the first level of categorizing these products. The MDCs were then subdivided into DRGs based on factors such as surgical status, organ system, age, symptoms, comorbidities, and discharge status.

Once the DRGs had been defined, every single diagnosis code from the International Classification of Diseases, system is categorized. To make the system manageable and statistically meaningful, the number of DRGs is initially intentionally limited to just under 500 codes - a significant reduction in overall code numbers from the voluminous ICD-9 list. Each DRG was specifically designed to reflect the "resource intensity," or the extent and amount of resource utilization required to provide the care represented by the products within the group.

The main idea that lies beyond DRG-based payment is payment per episode of hospital treatment meaning that all periods between admission of the patient until his/her discharge are being treated as one episode. Duration can vary, one or several days, or weeks in more serious cases. All expenses incurred in this period are included in the price. This means that the entire healthcare is included in one episode, and that there is only one payment for the entire episode. This approach is commonly referred to as „per case payment" and is being used in all EU member states.

DRGs are being used in a secondary/tertiary level of healthcare because there are most complex medical cases being treated.

Taking into account that no system can classify a patient into exactly one specific category and that it can happen that an episode of healthcare provision may cost more than average for the DRG it belongs, such cases are being observed as „episodes of extremely high values". These cases are usually extra paid for each day above a certain treshold, which is called „trim day".

Each type of service is supposed to have a defined price. There is even a higly sophisticated software for clustering services called DRG Grouper. It is being used in classification of

[51] Source: Serbian Health Insurance Development Strategy by 2020, National Health Insurance Fund of The Republic of Serbia, Belgrade, May 2013.

cases in DRG gropus. It takes the source data from the invoices issued for each individual case and gives the result – classification into a group.

It is often said that payment by DRGs encourages access to care, rewards efficiency in service provision, improves transparency and measurement of operations, and improves fairness of allocation of funds in the system by paying similarly across hospitals for similar care. Payment by DRGs also simplifies the payment process, encourages administrative efficiency, and basis payments on patient acuity and hospital resources rather than length of stay.

All healthcare institutions on a secondary and tertiary level of care have implemented the invoicing system in accordance with DRG system starting from 01 January 2014, which is the first of four phases of introducing DRG system in Serbia. The first phase has also included the application of new Rulebook on nomenclature of healthcare institutions on secondary and tertiary level of care, as well as new, adjusted formats of the Report on Hospitalization, History of Illness, and Identification form (Matični list), while the Bill for treatment has been cancelled.

6.4 Role of private insurance companies and impact of voluntary health insurance in Serbian healthcare

Key chapter points: ***Forms of health insurance that coexist in Serbia are mandatory public insurance, voluntary private and voluntary public insurance. Mandatory private insurance does not exist. The largest VHI market players are Generali, Uniqa, and Wiener Statdische. Most of their clients are corporate clients who contract this type of insurance for their employees (about 70%),***

6.4.1 Health insurance in Serbia – General overview

Two forms of health insurance that coexist in Serbia are ***mandatory*** and ***voluntary*** health insurance. Mandatory health insurance is a basic form of health insurance which provides the insured a right to health care and the right to financial compensation for cases provided by law to employees and other citizens covered by compulsory health insurance.[52]

Voluntary health insurance is the insurance from risks of payment participation in healthcare costs in accordance with the law, ensuring the citizens who do not have mandatory insurance, or are not included in the mandatory health insurance as well as providing a greater scope and standard of services and other kinds of rights from health insurance.

Besides insurance companies providing this type of coverages, voluntary health insurance can also be organized and implemented by the Republic Health Insurance Fund, insurance companies and investment funds for voluntary health insurance. In 2008, the government adopted a Regulation of voluntary health insurance which regulates types of VHI, conditions and procedures for organization and implementation. Also Volountary health insurance (VHI) in Serbia is being implemented in accordance with the Law on Health Insurance an is supposed to supplement and upgrade healthcare services that are availlable to insurers under the compulsory, i.e. mandatory health insurance.

This type of insurance is being contracted as long-term insurance for a period which can not be less than 12 months from the date of beginning of the insurance.

Along with the Ministry of Health, the National Bank of Serbia is also responsible for health insurance. NBS issues licenses to the insurance companies for which the Ministry of Health previously issued positive opinion on fulfillment of conditions for organizing and implementing certain types of voluntary health insurance.

Voluntary health insurance is being financed on the basis of premiums paid, and the amount of the premium depends on the level of risk (age, sex, medical condition of the insured).

Also, voluntary health insurance can be contracted as ***individual*** and ***collective***. Individual insurance occurs when an individual pays a premium to insure against the risk. Collective

[52] Source:Law on Health Insurance

insurance refers to companies which sign a collective contract with the insurance company for some of all of their employees.

According to the Law on Personal Income Tax, all aspects of voluntary insurance, including voluntary health insurance were considered as earnings, and in accordance with the Law on Contributions were the base for taxes and contributions. In June 2013, amendments to the Law on Personal Income Tax were adopted, which exempt premiums for voluntary health insurance, that the employer suspends and pays from the salary of the employee, from the tax base up to RSD 5,214 per month.[53]

This is a special kind of incentive for companies to pay their employees this type of benefits, especially as such incentives for employees represent mutual benefit for both the employer and the employee. While the benefits that employees have of VHI are obvious, employer's benefits are being represented in the reduction of the number of days that employees spend away from work, because in most cases as users of private health institution does not have to be absent from work in order to perform certain examinations, and waiting time is kept to a minimum. This form of benefits for employees has positive effects on overall productivity and performance of the company.

Also, one of the main advantages of further development and growth of VHI in Serbia in the upcoming years is that it should significantly reduce the amount of out of pocket expenditures in the overall healthcare system.

6.4.2 Voluntary Health Insurance – Market Insight

When it comes to voluntary health insurance in Serbia, the largest market players are Generali, Uniqa and Wiener Statdische. Most of their clients are corporate clients who contract this type of insurance for their employees (about 70%), while the rest are individuals that contract voluntary health insurance for themselves and their family members. However VHI market in Serbia is still at very low level of development. Based on data available from National Bank of Serbia we have calculated that 12% of population has this type of insurance. This percentage has been calculated when dividing total number of people having Voluntary Health Insurance (excluding travel insurance that NBS also classifies as a type of VHI) with the number of citizens according to the last listing of inhibitants. But according to information received from interviews with insurance companies, the actual percentage is significantly lower than 12% and rather gravitates around 2%.

The largest market players have contracts with a large number of health institutions (over 500 across the country) that must meet certain conditions in order to sign contracts with insurance companies. Also insurance companies take regular feedback from their clients after health services are provided, which enables them to continuously monitor the quality of service in health institutions.

Outpatient services are the major part of contracted VHI services, and cover about 70% of contracted risk coverages. Hospital services (all services which require that the patient stays in the health institution for more than 24 hours) cover about 30% of all contracted policies.

[53] Source: The Law on Personal Income Tax

The reason for this is that hospital treatment is still in most cases being provided in public institutions.

Additional coverages such as examinations, physical therapy, ocular examinations, dental care, medicines can be agreed with each VHI package.

The insurance companies point out that the main problem of the market growth in the voluntary health insurance is lack of information of the population about the benefits of such programs. People generally do not have the habit to buy VHI because it is still being considered as quite expensive and something that only a small number of people can afford. Insurance providers believe that this attitude is wrong, because their target client group in fact is the middle class population. A small number of very rich people does not even have the need for voluntary health insurance because they are able to afford treatments in the best clinics of the world, while VHI actually is intended for the middle class population, who for a premium of 15-50 EUR per month can provide themselves a high quality health care.

Also, other reasons of slow market growth in this area, are low standard of living and lack of involvement of the private sector in the state funding. Insurance companies consider that main problems in a possible future co-operation of private medical institutions and Republican Fund for Health Insurance, are payment risks, as well as the low price they could get for their services from RFHI.

In most insurance companies there are several different levels of coverage:

- **The basic package** covers mainly outpatient treatment, excludes inherited conditions and does not include the services of dentists and ophthalmologists as well as physical therapy. Usually includes one annuall physical examination in the institution of choice. The largest number of users are opting for this type of VHI (about 60%)
- **Extended coverage** generally covers outpatient treatments with coverage of dental, ophthalmological and physical therapy services, as well as cost of medicals - up to a certain amount (about 30% of users chooses this type of coverage).
- **Full coverage** includes a complete outpatient and hospital care, and in some insurance companies even includes the costs of treatment abroad (about 10% of users chooses this type of coverage).

Table 21: Overview of premiums for voluntary health insurance by insurance companies in 2014 and 2013 years (in 000 RSD)

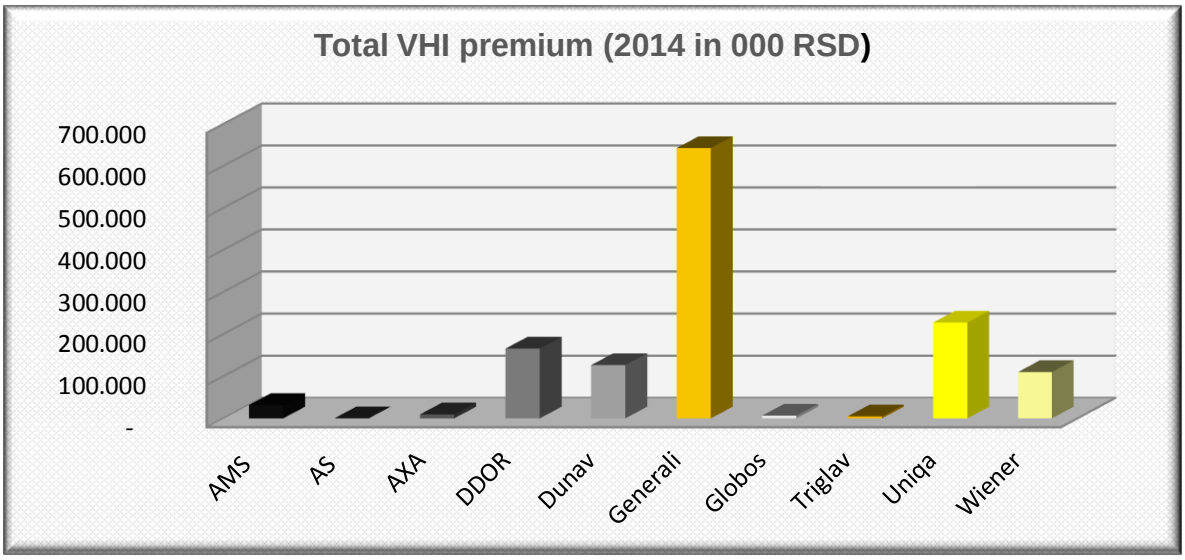
Insurance company	2014 (in 000 RSD)			2013 (in 000 RSD)		
	Total VHI premium	Total insurance premium	%of VHI in total insurance premium	Total premium VHI	Total insurance premium	% of VHI in total insurance premium
AMS	31,723	2,184,085	1.45%	30,169	1,874,447	1.61%
AS	283	228,129	0.12%	704	302,139	0.23%
AXA	9,509	869,383	1.09%	2,857	457,969	0.62%
Basler	Merged Uniqa Insurance			533	508,601	0.10%
DDOR	165,720	9,507,334	1.74%	159,409	8,292,503	1.92%
Dunav	126,430	17,551,843	0.72%	137,131	17,528,367	0.78%
Generali	642,487	15,026,269	4.28%	605,517	12,500,556	4.84%
Globos	6,528	284,083	2.30%	3,119	358,690	0.87%
Milenijum	-	-	-	-	-	-
Takovo	-	-	-	2,411	1,986,210	0.12%
Triglav	4,784	2,669,973	0.18%	-	-	0%
Uniqa	227,349	5,468,590	4.16%	149,486	4,707,744	3.18%
Wiener	110,081	7,037,305	1.56%	66,784	6,727,926	0.99%
Other insurance companies without VHI to offer	-	8,578,012	-	-	8,796,359	
Total	**1,324,894**	**69,405,006**	**1.91%**	**1,158,120**	**64,041,511**	**1.81%**

Source: http://www.nbs.rs/internet/latinica/60/60_2/index.html

Note: The National Bank of Serbia in its annual insurance reports includes some other types of voluntary health insurance, such as travel health insurance during the stay abroad under volontary health insurance. The share of such defined and calculated premiums VHI insurance companies in total premiums in 2014 amounted to 1.91%, and recorded a small increase compared to 2013 when it was 1.81%.

If we exclude travel health insurance and other forms of insurance that NBS considers voluntary health insurance from the total VHI premium in Serbia, participation of voluntary health insurance premiums in the premium of all forms of insurance is far lower and amounts to 1.04% in 2014 and 1.21% in 2013.

Picture 24: Total premium of Volontary Health Insurance in Serbia in 2014 per insurance company



Source: http://www.nbs.rs/internet/latinica/60/60_2/index.html

6.4.3 Voluntary Health Insurance inside the Republic Health Insurance Fund

In Serbia, RHIF is the only public and non-profit oranization engaged in providing voluntary health insurance coverage. RHIF was given the opportunity to deal with this supporting activity in accordance with the Regulation of Voluntary Health Insurance. Since 2010, VHI has been developing steadily, but insufficently. RHIF is entitled to offer insurance coverage to citizens who are not insured under compulsory health insurance. The fund has already introduced some products which open the possibility of combining and supplementing compulsory and volontary health insurance in the future.

The voluntary insurance of the Republic Health Insurance Fund (RHIF) is intended for every person who already has compulsory health insurance (with a health identification card as evidence), but who desires a different type, a greater scope and broader content, or a higher standard of health care than the ones provided within the compulsory insurance, and who wants to reduce the risk of unplanned medical expenses.

The RHIF has separate funds for voluntary and mandatory insurance. The voluntary insurance of the RHIF provides the following benefits:

- Right to receive reimbursement for dental expenses
- Right to receive reimbursement for visits with health specialists, and diagnosis from the physician of your choice
- Right to receive care from health specialists and a diagnosis from physicians in health institutions with which the RHIF has a contract of business collaboration
- Right to agreed compensation in the case of a diagnosis of serious illness and surgical intervention
- Right to agreed compensation in the case of hospitalization due to serious illness and surgical intervention

- Right to agreed compensation in the case of having a serious illness and surgical intervention
- Right to agreed compensation in the case of hospitalization regardless of the cause
- Right to receive reimbursement for urgent health protection while traveling and living abroad[54]

RHIF also offers Collective (group) voluntary insurance. This form of insurance is intended for employers, organizations, associations and other corporate entities that can provide additional health security for their employees and members. Collective voluntary health insurance is not subject to tax, which alleviates the financial burden on the employer, who is able to provide better working conditions for his employees. Collective insurance for serious illnesses, surgical interventions, hospitalization, dental care and many other health needs are included in the offer.

The amount of the insurance premiums depends on the agreed risk, selected sum insured on which insurance is concluded, and the discount defined by the tariff of the insurer. The risks insured and the amount of money given by the insurance is determined by the employer.

During 2014 a total of 11.877 policies of VHI have been contracted with RHIF. Out of those 9.708 were policies for travel insurance and 2.169 other policies. Total RHIF incomes from VHI amounted 14,27 million RSD, while total expenses were 8,54 million RSD in 2014.

Number of policies in 2014 has increased for 39% compared to previous year, while premiums collected increased for 28%

There were a total of 217 submitted requests for damage compensation, out of which 196 have been positively solved, 24 denied and 1 unsolved request.[55]

[54] Source: http://www.dobrovoljno.rfzo.rs

[55] Source: financial reports of RHIF for 2014. http://www.rfzo.rs/download/FINANSIJSKI_IZVESTAJ_ZA_2014.pdf

VII Information systems in Serbian healthcare institutions

Key chapter points: ***Information technology is important in integrating care, improving information sharing, improving patient safety and restoring patient trust.***

Information sharing is becoming increasingly important as a global industry-wide convergence blurs the lines between providers, pharmaceuticals, life sciences, clinicans and payers in healthcare. Hospitals, physicians, governments, public sector agencies and other commercial health organizations are beginning to understand the benefits of working together and sharing best practices to improve the healthcare system and deliver health services to consumers.

7.1. Public sector

In period between 2006 and 2013, The Republic of Serbia, Ministry of Health, carried out significant activities in field of introduction of modern informational and communication systems in health sector. Today more than 200 healthcare institutions in public sector, from a total of 356, have electronic health records (out of 159 health centers 152 have information systems that are in use, as well as electronic history of the disease in over 50 hospitals).

All software is compliant with the national standard (Ordinance on the content of technological and functional requirements for the establishment of integrated health information system (Official Gazette of RS 95/09). Standardization of software provides interoperability of software produced by various IT companies, through the obligation to ensure a minimum set of data.

The process of computerization went along with the support from international institutions:

- The World bank:
  - *Project: Development of healthcare in Serbia* (2003-2008) and *Healthcare development in Serbia – additional financing* (2009-2012) which had the goal of implementing the hospital informational system – BIS in 24 hospitals (electronic illness history records), 45 of laboratory information systems - LIS ad radiology information system (RIS and PACS) for 6 hospitals.
  - DILS project – *Provision of improved services on local level*, which took place between 2009 and 2013 and which provided the information systems for the 162 health institutions on primary level of care – healthcare centers and institutes for health protection of students and elderly people (over 95% of the system is fully operational);
- The European Union:
  - *Integrated Healthcare Information System* (EU IHIS) which carried out two main activities:
  - Introduction of hospital information systems in 19 health institutions in Serbia;
  - Development of electronic health records (unique medical record) - EHR (Electronic Health Record).

EU-IHIS project (2012-2015) is jointly implemented by the MoH of the Republic of Serbia and the EU. The regional office of WHO for Europe – Office in Serbia is in charge of the implementation, with the administrative assistance of the UN Office for Project Services

The electronic health record (EHR) - is conceptually rounded and developed in compliance with the existing regulations (along with suggestions for improvement), working processes and systems for coding and classification. The system was piloted in several hospitals. Basic aspects of electronic health records are as follows:

- collection of health data essential for health status of individuals during lifetime – data are automatically entered into information systems of healthcare institutions or are entered through a portal;
- data collected and compiled from electronic health records from various health institutions;
- EHR can be shared among all relevant health institutions and health workers, i.e. data form the EHR can be downloaded - EHR monitors the patient's movement through the health system,
- EHR has the purpose of improving the health of the patients (disease prevention, diagnosis, treatment, rehabilitation)
- Patients have a greater chance of favorable health outcomes

Expert group for healthcare information (Think Tank) has provided:

- Preparation and updating of the conceptual framework of EHR;
- Preparation of comprehensive sets of health data and information at all levels of care (from individual practices to the policy development);
- Preparation of a group of indicators in order to obtain a reliable picture of the functioning of the healthcare system;
- Preparation of a voluminous data dictionary;
- Definition of accompanying metadata;
- Recommendations for legislative framework;
- Upgrade and integration with the existing healthcare information system in the Republic of Serbia;
- Analysis and recommendations on the protection of privacy and confidentiality of health data;
- Multidisciplinary approach during all phases of operation.

Upon completion of the EU-IHIS (July 2015), IT equipment was handed over to RHIF, and intellectual property rights and the complete documentation to the Ministry of Health (technical documentation regarding the architecture of the database HER, as well as the entire system, the source program, instructions for system administrators, end user instructions, a set of recommendations, analysis and reports).

Bearing in mind the above stated i.e. that more than 200 medical institutions already have health information systems which are in the production phase and that the electronic healthcare record for patients is developed the expected next steps are:

- ensuring the sustainability of the whole system (funding of maintenance and improvement of systems that are already in place as well as defining the number of IT specialists in institutions),
- further computerization of medical institutions,
- Integration of the whole system.

Regarding this, the Ministry of Health has announced a tender for the procurement of integrated health information system (IHIS) whose main components include: the establishment of IHIS data center, electronic medical record of patients, e-Prescription, e-Referral, reporting and portal for healthcare workers as well as patients. Deadline for completion of the work is six months after signing the contract with the selected contractor.

7.2. Private sector

The use of modern information technology, equipment and software solutions is much better and at a much higher level with Serbian private healthcare providers. Standards for using and investments in IT and telecommunication infrastructure are constantly growing. Keeping electronic health records, keeping up with the latest technology and making sure that new technologies and equipment are appropriate to the organization, validated and compliant with patient needs is a standard widely met among private healthcare providers.

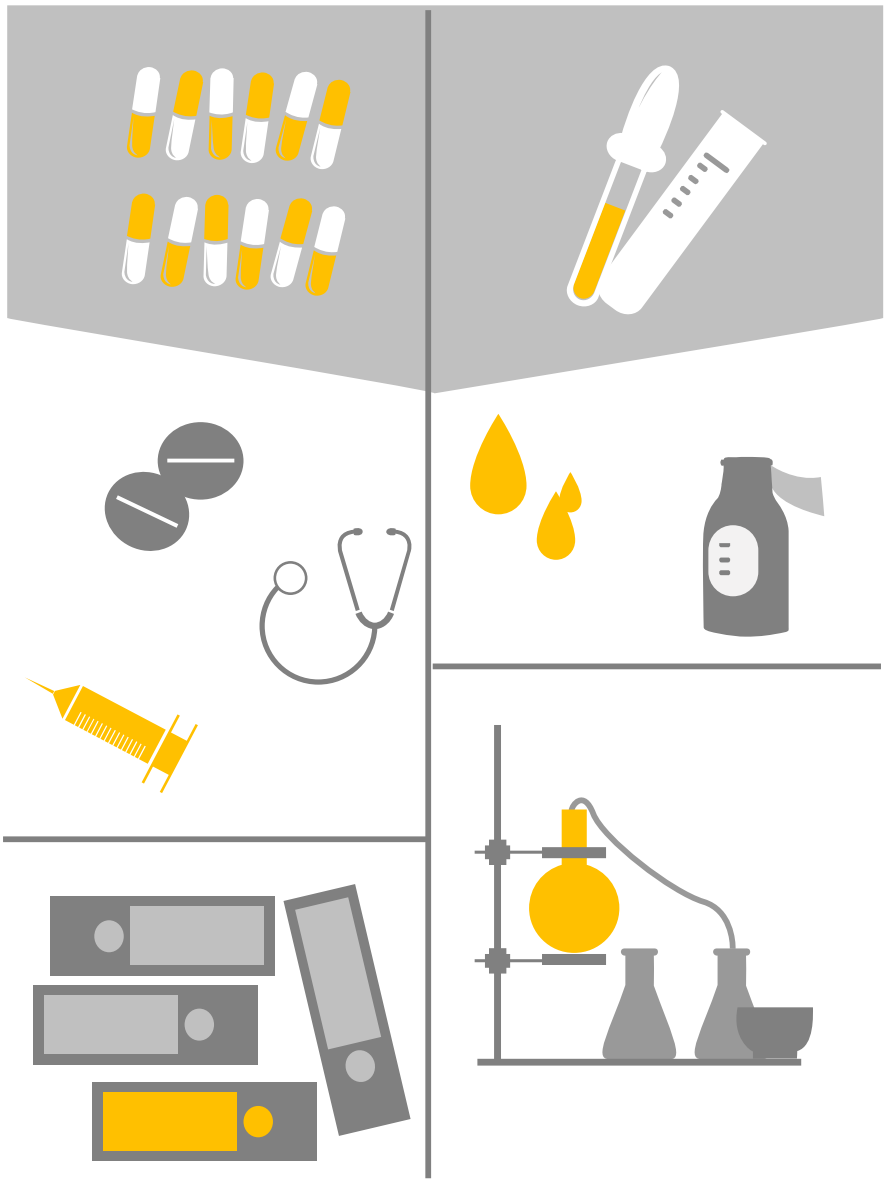
Unfortunatelly, the full potential of the equpiment and software solutions is not yet fully used, and it will be used only when public healthcare institutions develop similar solutions in order to be able to exchange data instantaneously among all institutions in the system.

Issue identified: Low implementation and use of information and communication technologies in all HC institutions.

Recommendation: Integrated IT system for both public and private HC providers

**** For more details see RECOMMENDATIONS part of this Document.*

MICRO HEALTHCARE STUDY



VIII Comparative view of expenses, incomes and costs of selected services

8.1 Observed services

There are three main types of institutions in Serbian healthcare system: primary, secondary and tertiary healthcare institutions.

- Primary healthcare institutions provide basic medical services, which include: health protection and improvement, prevention and early discovering of diseases, treatment and rehabilitation; dental services; home visiting; emergency care and transportation; rehabilitation of children and youth with physical and mental disabilities etc.
- Secondary healthcare institutions provide specialist - consultative and hospital services. Specialist - consultative services include more complex measures and procedures of diagnostics, treatment and rehabilitation of sick and injured patients than those provided by primary institutions.
- Tertiary healthcare institutions provide the most complex types of health protection, specialist-consultative services, hospital services and they also perform scientific and education activities in accordance with laws which regulate those areas. Clinical centers and clinical & hospital centers can be founded only in university cities which have faculties of medicine.

Services that we have observed during micro analysis are:

- In primary care:
  - Gynecological examination – including PAPA test, colposcopy, gynecological ultrasound and vaginal swab without further analysis.
  - Cardiology examination with EKG and ultrasound of the heart
  - Pediatric examination of children of all ages and
  - Pulmonological examination with spirometry

The last service was not available for research in the public sector, because public primary care institutions do not provide this type of examinations.

- In secondary and tertiary care:
  - Orthopedy
    - Shoulder and knee arthroscopy
    - Hip surgery with arthroplasty (hip replacement)
  - Gastroenterology
    - Gastroscopy (with analgosedation and under local anesthesia)
    - Colonoscopy
  - General Surgery
    - Gallbladder surgery (standard and laparoscopic)
    - Hernia surgery (standard and laparoscopic)

- Urology
  - Prostate biopsy
  - Radical prostatectomy (standard and laparoscopic)
  - Interstitial brachytherapy of prostate cancer

Based on acquired data we have conducted thorough analysis of the efficiency between the private and the public sector and conclusions and recommendations will be shown in the following chapters of this Document.

8.2 Primary care

Key chapter points: ***Analysis has shown that direct costs per service are on average 3.07 times higher in private healthcare institutions compared to public ones. Since the greatest portion of direct costs in providing health services on primary level of care are payroll expenses, we have conducted a "What If Analysis" where we assumed the equal duration of time spent per patient in public and private institutions. This would decrease difference in direct costs per service to in average 1,7 times higher direct costs in private HCIs.***

8.2.1 Analysis of direct costs per selected service between public and private institutions

Table 22: Direct costs per service (RSD)

Service name	Costs	Private HCIs	Public HCIs	% of difference
Gyneacology	Costs of salaries of specialists	597.62	159.62	374%
	Costs of salaries of nurses&techn.	116.67	75.35	155%
	Costs of consumables	234.56	152.70	154%
	TOTAL DIRECT COSTS PER SERVICE	948.85	387.66	245%
Cardiology	Costs of salaries of specialists	1002.74	159.62	628%
	Costs of salaries of nurses&techn.	116.67	75.35	155%
	Costs of consumables	31.72	2.01	1577%
	TOTAL DIRECT COSTS PER SERVICE	1151.13	236.98	486%
Pediatry	Costs of salaries of specialists	422.66	159.62	265%
	Costs of salaries of nurses&techn.	116.67	78.14	149%
	Costs of consumables	15.62	1.60	979%
	TOTAL DIRECT COSTS PER SERVICE	554.96	239.35	232%
Pulmonology	Costs of salaries of specialists	913.88	#N/A	#N/A
	Costs of salaries of nurses&techn.	116.67	#N/A	#N/A
	Costs of consumables	44.96	#N/A	#N/A
	TOTAL DIRECT COSTS PER SERVICE	1075.51	#N/A	#N/A

The third column in the above table shows average direct costs per service in the observed private health centers. The fourth column shows the same thing, but this time in observed public health institutions. The last column shows a percentage of difference between the two sectors. (As mentioned earlier, pulmonology is a service that is not available in primary care public health centers).

From the comparative view of the analysis we have conducted among private and public health centers from primary care we were able to come to the following conclusions:

1) Direct costs that we compared per service (salaries and consumables) are on average 3.07 times higher in private healthcare institutions compared to public ones. One of the reasons for this difference is due to higher costs of employees. It has been noted that employees in the private health sector have in average, significantly higher salaries than their colleagues in the public sector. This refers both to medical and non-medical staff.

2) The other main reason why direct costs per service are significantly higher in private institutions is that in private sector a common practice is that duration of one appointment is approximately 30 minutes, while in public primary care institutions, appointments are scheduled for 15 minutes. We estimated costs of salaries per time needed for medical staff (physicians and technicians) to provide the service. It is then understandable that if providing the service lasts twice as long, it will cost more in the end.

3) The third reason why selected services cost more in private institutions is price of consumables. Although materials can be purchased at approximately the same prices, it has been noted that private HC institutions use more materials and often items of higher quality, than the ones in public institutions. For example most private institutions use plastic disposable speculums for one gynecological appointment, while in public care metal ones are being used and sterilized after each use. When sending samples for analysis in private institutions commonly more material (for example: swab sticks, swab tiles, etc.) is being used than in public health centers.

So the final conclusion regarding direct costs of services in primary care is that even though at first sight it may seem that public institutions are more efficient because of lower costs, the bigger picture may not be that simple. Qualitative aspect of the services must be taken into account. Private institutions have higher costs, but they also have better paid medical staff, which is than more motivated, they use supplies of better quality and more modern equipment, which overall provides a higher quality of service. Also, private institutions do not have waiting lists as it can often be the case in public institutions. Even though there may not be an official waiting list for some of the selected services, in public institutions patients often have to wait for months to schedule an appointment with the physician, unless it is an emergency. In private institutions patients usually can make an appointment within 24 hours. In the end, appointments in private institutions last twice as long for providing the same service as in public institutions, which means that physicians have more time to spend with each patient and ultimately have a better understanding of their problems.

Issue identified: Uneven quality of service provided between private and public healthcare providers

Recommendation: Greater inclusion of private HC providers would create more competitive market conditions and equal patient treatment througout the System. IT tools can ensure process improvements.

**** For more detailes see RECOMMENDATIONS parti of this Document.*

An efficient delivery system is critical if the healthcare industry is going to meet rising customer expectations. Poor quality, long response and delivery times and difficulties accessing patients are some of the biggest concerns that have been raised by the healthcare industry.

Increased competition within the System means that HCIs need to provide better care for less money. However if the healthcare value chain is not fully mature, meeting regulations and delivering high quality service can be difficult to achieve.

Uneven quality of service is often related to poor processes. Physicians, hospitals, drug companies can improve processes by implementing modern information technology tools (for recommendation see - *IT Support* in the Recommendations part of the Document).

8.2.2 Analysis of direct costs per selected service between public and private institutions – „WHAT - IF Scenario“

Due to the fact which was explained in the previous section that providing a medical service in private practice in average lasts twice as long, as in public care, hence the costs of directly related employees (specialists, nurses and technicians) are twice as big per each service, we have made a "What-if scenario" in which we tried to conclude how much the direct costs per service would be if providing the service lasted equally in both private and public care institutions.

Our research shows that this would significantlly decrease the costs and this way **direct costs wolud be on average 1,7 times higher in private healthcare institutions,** Compared to 3,07 times we initially described, this is a significant reduction in costs that can be acheived if providing services in both sector would be comparable considering the duration.

This conclusion makes sence if we have in mind that salaries are the greatest portion of all (both direct and indirect) costs in healthcare institutions, especially in primary care where costs of consumables per service are not significantly high.

The results are shown in the below table:

Table 22: Average costs per service in private practice in a "What-if Scenario"

Private HC institutions (15 minutes scenario)				Difference comparing to public sector
	Priv.HC1 (RSD)	Priv.HC2 (RSD)	Average (RSD)	
Gyneacology	633.78	549.63	591.70	153%
Cardiology	837.48	345.37	591.42	250%
Pulmonology	#N/A	#N/A	#N/A	#N/A
Pediatry	253.15	317.43	285.29	119%
Total difference:				**170%**

8.2.3 Analysis of incomes between public and private institutions in primary level of care

Table 24: Share of incomes in private primary care HC institutions

No	Description	Average
1.	Regular income from providing medical services	**98.38%**
2.	Interest income	1.17%
3.	Other income	0.46%
	Total	100%

Picture 25: Share of incomes in private primary care HC institutions

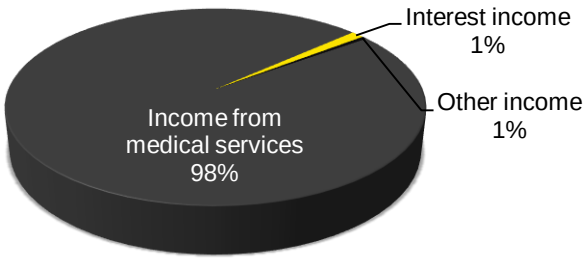
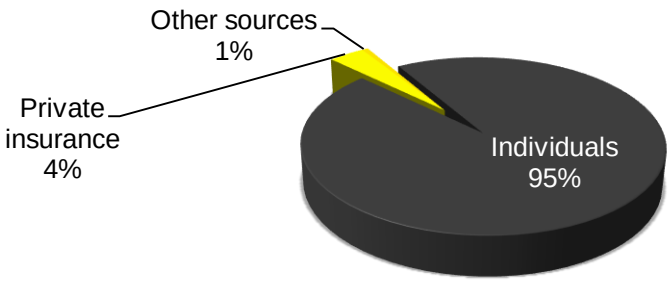


Table 25: Main sources of incomes in private primary care HC institutions

No	Description	Average
1.	Individuals	**95.6%**
2.	Private insurance	3.8%
3.	Other sources	0.6%
Total		100%

Picture 26: Main sources of incomes in private primary care HC institutions



In private Health centers the highest participation in total incomes had the regular income from medical services with an average participation of **98.38** percent. We can also see that

the main portion of incomes in private health centres comes from Individuals (**95.6%**), and the remaining **4.4%** come from private insurance and other sources.

Table 26: Share of incomes in public HC institutions

No	Description	Average
1.	Transfers between budget users at the same level	**91.38%**
2.	Current transfers from other levels of government	2.08%
3.	Income from property belonging to insurance policy holders	0.12%
4.	Sales of goods and services (own income)	6.18%
5.	Other income	0.24%
	Total	100%

Picture 27: Share of incomes in public primary care HC institutions

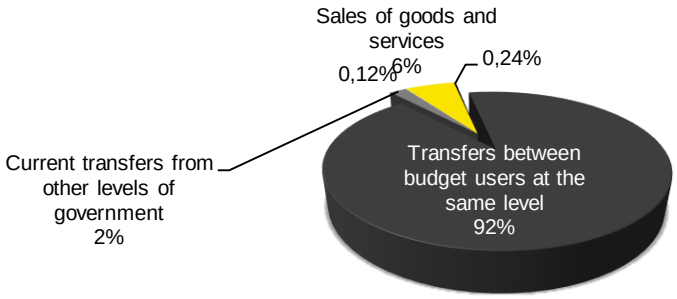
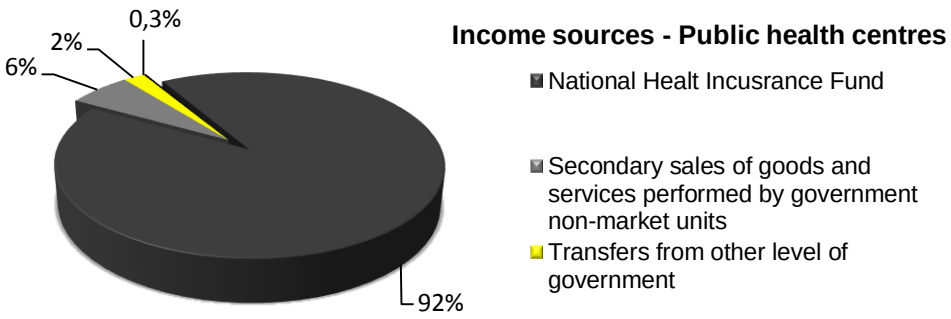


Table 27: Main sources of incomes in public HC institutions

No	Description	Average
1.	National Health Incusrance Fund	**91.4%**
2.	Secondary sales of goods and services performed by government non-market units	6.2%
3.	Transfers from other level of government	2.1%
4.	Other sources	0.3%
Total		**100%**

Picture 28: Main sources of incomes in public primary care HC institutions



In public Health centers the highest participation in total incomes was for transfers between budget users at the same level i.e. funds from Republic Health Insurance Fund, with participation of **91.4%** percent. Remaining 8.6% comes from secondary sales of goods and

services performed by government non-market units, transfers from other government levels and other sources.

8.2.4 Analysis of expenses between public and private institutions in primary level of care

Table 28: Share of expenses in private HC institutions

No	Description	Average
1.	Cost of material and energy	**10.29%**
2.	Salaries, wages and other personnel expenses	**52.10%**
3.	Production service costs	**21.09%**
4.	Depreciation expenses and	2.70%
5.	Non-material expenses	**7.16%**
6.	Financial expenses	6.17%
7.	Other expenses	0.38%
Total		100%

Picture 29: Share of expenses in private HC institutions

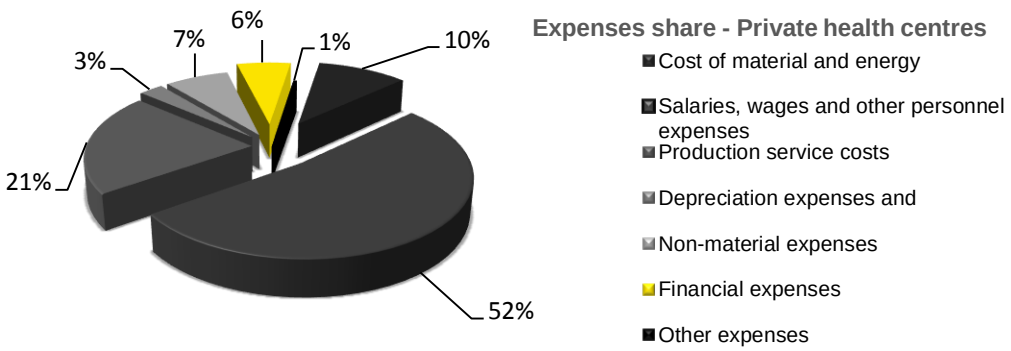
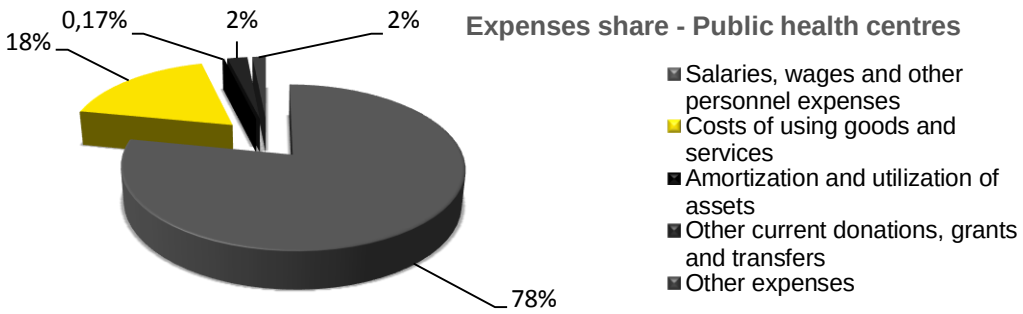


Table 29: Share of expenses in public primary care HC institutions

No	Description	Average
1.	Salaries, wages and other personnel expenses	**78.13%**
2.	Costs of using goods and services	**17.85%**
3.	Amortization and utilization of assets	0.17%
4.	Other current donations, grants and transfers	2.31%
5.	Other expenses	1.54%
	Total	100%

Picture 30: Share of expenses in public primary care HC institutions



In private Health centers the highest participation in total expenses was for salaries, wages and other personnel expenses with an average of **52.10%** in total expenses. On the second place are production service costs, with participation of **21.09%** in average. Other relevant participation in total expenses have costs of material and energy **10.29%** and non-material expenses with an average participation of **7.16** percent.

In public Health centres the highest participation in total expenses also was for salaries, wages and other personnel expenses with **78.13%.** On the second place were Costs of using goods and services, with participation of **17.85%**. This amount mostly consists of material and energy costs.

Costs of salaries and dependent costs are the key part of total costs and mostly contribute to competitiveness. Savings in this area are important for the improvement of profitability. Healthcare services in private institutions on primary level of care are labor intensive professional services, so their quality and efficiency mostly depend on the quality of workers - professionals.

8.3 Secondary/tertiary care

<u>Key chapter points:</u> In secondary and tertiary level of care the analysis has shown that direct costs per service are on average 1,86 higher in public institutions. Main reasons for lower efficiency of public HC providers in secondary/tertiary level of care are - Longer hospitalization i.e. days of hospital treament for patients in public hospitals; More hours of direct engagement of medical staff per patient and higher quantities of consumables in public institutions, and longer treatment

Uneven quality of services provided between public and private institutions exists on all levels of care – primary, secondary and tertiary. In a nutshell – greater inclusion of private sector needs to be achieved especially in the area of hospital treatment and for those procedures that have long waiting lists. This would increase competition and cost effiiciency in the whole system. That would than also have positive effects on financial sustainability of Serbian healthcare, reduce waiting lists, offer more even quality of care and easily accessible health care to all the citizens.

Our fieldwork in secondary/tertiary level of care was based on the same calculations and assumptions as in primary care sector. We identified direct costs allocated to each of the selected services and made a comparison of those costs between the public and the private sector.

For the purpose of comparison of direct costs we have selected two private and one public hospital. The reason for an uneven number of institutions between public and private sector is that there are significant differences between costs in private sector, so we needed at least two institutions in order to create an average. Differences come from different cost structure, different salaries for employees (both medical and non-medical staff); different purchasing prices for materials, cooperation with different suppliers...etc. Since these differences do not exist, or are disregardably small in public hospitals, one institution was enough for comparison.The results are shown in the table below:

Table 30: Comparison of direct costs per selected service between private and public institutions in secondary/tertiary level of care

Procedure	Average direct costs for the service in private sector (RSD)	Average direct costs for the service in public sector (RSD)	Relative difference between public and private sector
Shoulder arthroscopy	46.510,64	x***	x***
Knee arthroscopy	49.518,77	x***	x***
Hip replacement	131.872,75	218.829,38	166%
Gastroscopy under analgosedation	4.470,90	8.719,42	195%
Gastroscopy under local anesthesia	1.974,83	5.585,58	283%
Colonoscopy under analgosedation	5.595,41	7.528,77	135%
Colonoscopy under local anesthesia	2.652,23	14.060,75	530%
Gallbladder surgery - standard	60.239,36	70.652,98	117%
Gallbladder surgery – laparoscopic	40.525,60	62.704,00	155%
Hernia surgery - standard	47.452,17	42.002,50	89%
Hernia surgery - laparoscopic	70.581,69	80.612,82	114%
Prostate biopsy	4.105,01	21.103,27	514%
Radical prostactectomy - standard	133.629,38	405.740,82	304%
Radical prostactectomy - laparoscopic	114.653,26	x***	x***
Interstitial Brachyterapy of prostate cancer	x***	x***	x***
Total difference in average direct costs			186%

x* - Selected service is not being provided in selected public institution, so comparison could not be made.**

As it can be seen, the situation is completely opposite from the one found in the primary level of care. Here, the direct costs for selected services are on average 1,86 higher in public healthcare institutions than in private hospitals in Serbia.

Actually, from all services that entered the scope of the study, there is only one that had somewhat lower costs in public sector, and that is Standard (open) hernia surgery. Private sector has shown to be more efficient in providing all other observed services, at least when comparing direct costs per service.

Main reasons for these differences are:

- Longer hospitalization i.e. days of hospital treament for patients in public hospitals
- Even though salares are smaller in public secondary care institutions, longer hospitalization means that there are also more hours of direct engagement of medical staff per patient
- Different methods of providing a specific service often require higher quantities of consumables in public institutions, and longer treatment also increases direct costs.

Table 31: Explanation of differences between direct costs of selected services in public and private healthcare institutions on the secondary/tertiary level of health care

Component of direct costs	Average number of days or (hours) of hospitalization per procedure		Average time engagement of medical staff per one patient	
Procedure	**Public sector**	**Private sector**	**Public sector**	**Private sector**
Shoulder arthroscopy	x***	1 dan	x***	29,92 h
Knee arthroscopy	x***	x***	x***	30 h
Hip replacement	11 dana	8 dana	139 h	118,16 h
Gastroscopy under analgosedation	/	30 min	3 h	4,25 h
Gastroscopy under local anesthesia	/	30 min	4 h	2,91 h
Colonoscopy under analgosedation	/	30 min	4,75 h	5,96 h
Colonoscopy under local anesthesia	/		2,75 h	2,75 h
Gallbladder surgery - standard	5 dana	4 dana	79,58 h	60,08 h
Gallbladder surgery – laparoscopic	3 dana	1 dan	61,92 h	29,96 h
Hernia surgery - standard	3 dana	1 dan	57,25h spinal / 52 h lokal	26, 95 h opšta an.
Hernia surgery - laparoscopic	3 dana	1 dan	61,92 h	30,75 h
Prostate biopsy	1 dan	/	13,08 h	3,37 h
Radical prostactectomy - standard	20,5	8,5 dana	209,17 h	127,55 h
Radical prostactectomy - laparoscopic	x***	4,5 dana	x***	95 h
Interstitial Brachyterapy of prostate cancer	x***	x***	x***	x***

Component of direct costs	Average cost of wages of medical staff per service for one patient (RSD)		Average cost of consumables per service for one patient (RSD)	
Procedure	**Public sector**	**Private sector**	**Public sector**	**Private sector**
Shoulder arthroscopy	x***	26.128,13	x***	23.390,64
Knee arthroscopy	x***	26.175,00	x***	20.335,64
Hip replacement	46.611,36	82.340,63	172.218,02	49.532,12
Gastroscopy under analgosedation	1.651,79	4.329,95	7.067,63	1.616,15
Gastroscopy under local anesthesia	1.127,06	1.876,71	4.458,52	98,12
Colonoscopy under analgosedation	2.101,23	3.973,76	11.959,52	1.621,65
Colonoscopy under local anesthesia	1.126,29	2.390,63	6.402,48	261,60
Gallbladder surgery - standard	27.709,93	34.383,62	42.943,05	25.855,74
Gallbladder surgery – laparoscopic	22.091,28	21.444,11	40.612,72	19.081,49
Hernia surgery - standard	18.706,53	18.915,51 opšta an.	23.295,97	30.267,89 opšta an.
Hernia surgery - laparoscopic	22.091,28	19.660,99	58.521,54	50.920,70
Prostate biopsy	4.627,47	2.854,61	16.475,80	1.602,66
Radical prostactectomy - standard	69.700,98	71.789,26	336.039,84	61.840,12
Radical prostactectomy - laparoscopic	x***	56.438,67	x***	58.214,60
Interstitial Brachyterapy of prostate cancer	x***	x***	x***	x***

x* - Selected service is not being provided in selected public institution, so comparison could not be made.**

8.3.1 Analysis of incomes in public and private institutions in secondary/tertiary level of care

Table 32: Share of incomes in private secondary/tertiary care HC institutions

No	Description	Participation in %
1.	Income from selling services on domestic market	**90,09%**
2.	Income from seling goods and services on foreign market	8,73%
3.	Income from donations	0,04%
4.	Financial income	0,30%
5.	Other income	0,84%
	Total	**100%**

Picture 31: Share of incomes in private secondary/tertiary care HC institutions

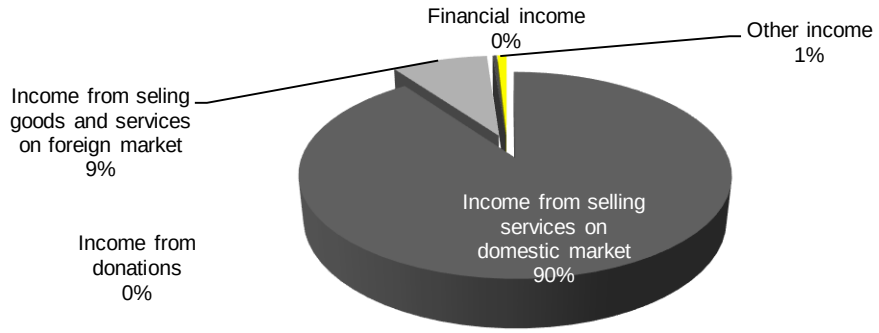
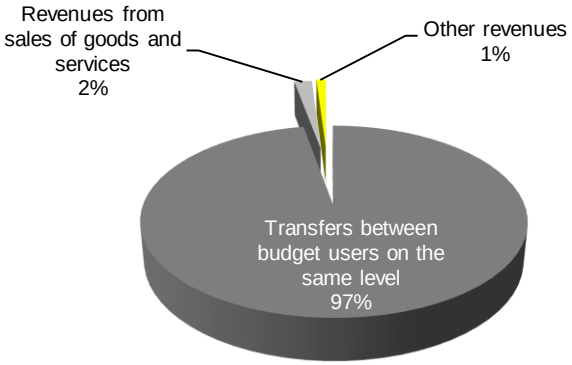


Table 33: Share of incomes in public secondary/tertiary care HC institutions

No	Description	%
1	Transfers between budget users on the same level	**97,16%**
2	Revenues from sales of goods and services	1,84%
3	Other revenues	1,00%
	Total	**100%**

Picture 32: Share of incomes in public secondary/tertiary care HC institutions



As we can see from the above pictures and tables, analysis of financial statements of the selected private and public institutions in secondary and tertiary level of care has shown that main sources of incomes in private institutions come from selling goods and services on domestic market (over 90%). In public institutions the dominant source of incomes, however remain transfers between budget users (mainly RHIF).

8.3.2 Analysis of expenses between public and private institutions in secondary/tertiary level of care

Table 34: Share of expenses in private secondary/tertiary care HC institutions

No	Description	Participation in %
1.	Cost of materials	**17,65%**
2.	Cost of fuel and enery	1,00%
3.	Payroll	**54,20%**
4.	Advertising, maintenance and transport costs	6,08%
5.	Amortization	5,96%
6.	Cost of non-production services	**10,30%**
7.	Cost of payment transaction, membership fees and other non-material costs	1,54%
8.	Financial expenses	1,57%
9.	Other expenses	1,09%
10.	Fair value adjustments	0,61%
	Total	**100%**

Picture 33: Share of expenses in private secondary/tertiary care HC institutions

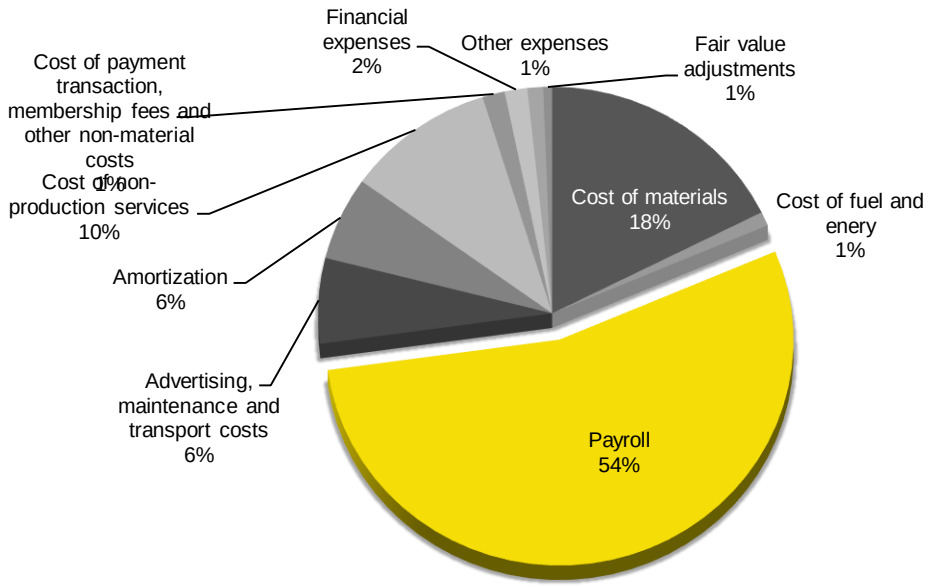
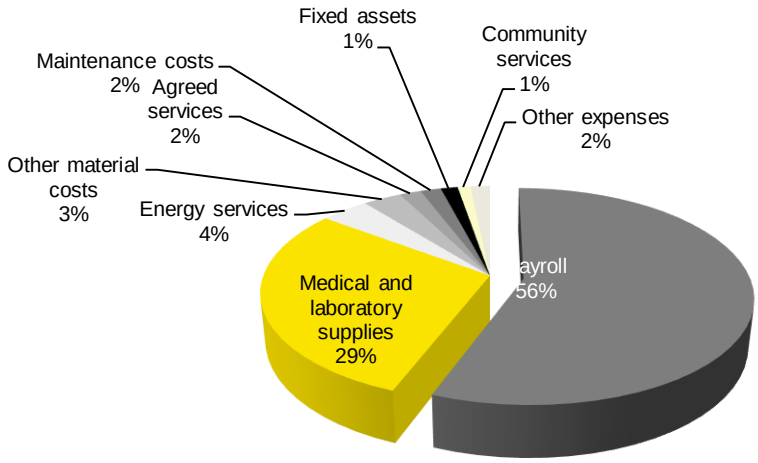


Table 35: Share of expenses in public secondary/tertiary care HC institutions

No	TOTAL EXPENSES AND EXPENDITURES	%
1	Payroll	**55,91%**
2	Medical and laboratory supplies	**29,38%**
3	Energy services	4,01%
4	Other material costs	3,18%
5	Agreed services	1,77%
6	Maintenance costs	1,70%
7	Fixed assets	1,40%
8	Community services	1,05%
9	Other expenses	1,61%
	Total	**100%**

Picture 34: Share of expenses in public secondary/tertiary care HC institutions



And as shown in the above pictures and tables, analysis of financial statements of the selected private and public institutions in secondary and tertiary level of care has shown that main types of expenses in private institutions are:

- Payroll costs (54,2%)
- Cost of materials (17,6%)
- And costs of non-production services (10,3%)

In public institutions the expense structure is not much different. Payroll costs account for about 55,9% of all costs, and costs of materials (i.e. medical and laboratory supplies) are 29,4% of total costs.

RECOMMENDATIONS

IX Recommendations for Increasing Serbian Healthcare System Efficiency

9.1 Financial sustainability of the system

Issue identified:

Public healthcare system in Serbia is financially unsustainable in the long run and is constantly being supported by additional financing from the Republc Budget .

Description of issue:

1) ***Over spending in relative terms and insufficient spending in absolute terms.***

Rising healthcare costs have always been a matter of great concern for the State. Fixed and variable costs of providing healthcare are increasing on almost every front. Most of these increases translate into price increases for payers. The funds obtained from these price increases pay for operational costs of a robust infrastructure and inefficiences in the industry. Net revenues generated will not be enough to continue covering the rising costs of providing healthcare services, putting financial sustainability of operators at stake.

There is a number of factors that are responsible for rising healthcare costs:

- Physicians, hospitals and perscription drugs account for about 75% of the increase
- Equipment and construction, dental costs, administration and other services account for about 25% of the increase
- Although about two thirds of spending is because of rising prices from providers, and not an increase in healthcare use, threatment volumes are increasing as well, due in part to rise in chronic illnesses.

As we can see from data in Picture 3, in 2013, Serbia had the highest level of healthcare expenditures among the observed countries by two criteria, and second highest by one criterion. Total expenditure as a percentage of GDP is very high in comparison with other countries, and only Greece had similar value. Although government expenditure in Serbia was the highest in relative terms, there were also the private sector healthcare expenditures, which were the second highest, so it becomes clear than why total healthcare expenditures as a percentage of GDP were so high. Even though expenditures on healthcare in Serbia are high in relative terms, they are in fact low and insufficient in absolute terms. That was previously illustrated in Picture 7 showing healthcare spending per capita in PPP int. $ in Serbia and selected European countries in 2013. Serbia's expenditures are in the middle of the list, with Bulgaria and Romania below it, but with Greece and Hungary above it.
Also during fieldwork in public institutions and when analyzing their financial data a significant endangering of liquidity of healthcare institutions has been noticed due to non-settlement of liabilities from the previous periods and the non-recognition of accrued expenses in the current period.

2) *Inefficient use of assets and inventories and lack of incentives*

We noticed that there is lack of communication, collection of data and data sharing which are time consuming and sometimes even does not exist, or information shared between institutions are not up to date. It can be presented on the following examples:

- Donations – donations are currently tracked only as values in Form 5 – Report on Budget Execution submited by the healthcare institutions to RHIF. There is no data on assets, items received and most importantlz there is no data whether these assets are all fully utilized.
- Inventories – data on stock levels per institutions are not shared through the system. Due to poor information flow some institutions have quantities of medicines and/or consumables exceeding their needs, while others are suffering a shortage of the same medicines and /or consumables.
- Assets – Data on assets, respecitively equipment used are not shared or centrally monitored. Efficient utilization of assets can be achived if all data are collected and shared in one place/ IT system.
- Incentives – There are no incentives for good management and for more efficient ways of conducting business in public healthcare institutions. More efficient institutions that make savings during the year are not encouraged to continue doing so. Savings made are being transferred for the next budget year and considered as an advance payment from RHIF.

This issues are also elaborated in Recommendation for the implementation of IT solution.

3) *Lack of financial controlling actions*

Obligation to submit an annual Report on adequacy and functioning of the established system of financial management and controlling was fulfilled by 46 healthcare institutions during 2013, out of 340 of them. That means that 86% of healthcare institutions have not submitted these annual reports, which can be due to lack of understanding the proper ways of conducting finance management and controlling functions.

Main control over financial funds is done by specific institutions for funds transferred to healthcare institutions. Respectivelly, RHIF monitors funds transfered from them to specific healthcare institutions, local founders monitor only funds they trasfered to HCIs etc. We havent spotted an existence of any regulatory body or part of any organization that is in charge of monitoring finance condtions of HCIs in total, and therefore for the system as a whole.

Key performance indicators (KPIs) are not set and monitored in financial terms. Also we didnt identify any penalty or incentive to encourage finance management in HC institutions.

Revenues that can be generated outside the RHIF contracted services are not recognized in the whole system as a possible solution and initiatives are done only by few institutions.

Most of the reports are prepered on a cash flow basis and there is a lack of big picture over financial conditions in HC institutions and therefore in the overall HC system.

All of the above stated shows that the State does not have enough funds to cover ever rising healthcare needs. At the same time there is a lack of finance management in individual institutions and overall HC system.

Recommendation:

From a revenue standpoint, pricing and volume are key elements in improving results. A highly regulated healthcare system has few options when pricing its services, and with such a complex revenue model, as in the case of Serbia, and considering the overall purchasing power of citizens, it is difficult to set high prices.Solution for financial unsustainability potentialy lies within a mix of public and private financing.

Health public system should still predominantely be financed through employee and employer contributions but State should consider establishing a ***Purchasing Mechanism*** based on contracts with units responsible for delivering health care – contracts with private healthcare providers similar to ones used in the public system (between RHIF and HCIs) could be concluded. Those could also be similar contracts to those that the State Fund already concludes with private HCIs.

Table 36: Main objectives and action points of Hospital Purchasing Mechanism

Main objectives	Actions
Expenditure control	Creation of responsibilty policies on a macro level and an effective expenditure control.
Assuring a high level of quality	Creation of goals adjusted to the introduction of new technologies, research and professionals qualification.
Maximizing units efficiency	Creation of systems to monitor/control each hospital unit activity and promote competition between public and private units, increasing their efficiency.
Assuring management responsibility	Price list, established according to activity/cost items, which will be used as a reference for the managers responsibility in the fulfilling of the contracted goals.
Maximizing data quality	Information systems improvement, assuring a better data reliability. Development of a cost activity based system.

The main characteristic of this solution would be to determine a fixed price for each type of activity that will be contracted with the HCIs. Prices need to be structurally adjusted according to determined hospital gropus or DRGs (in tertiary level of care). Price complexity is directly related to a negotiated case-mix index or CMI. The financing amount each institution will get for the healthcare provided depends on the type and amount of effectively delivered services, on the contracted price and on the contracted case-mix index[56]. Also,

[56] Case mix index (CMI) is a relative value assigned to a diagnosis-related group of patients in a medical care environment. The CMI value is used in determining the allocation of resources to care for and/or treat the patients in the group. Patients are classified into groups having the same condition (based on main and secondary diagnosis, procedures, age), complexity (comorbidity) and needs. These groups are known as Diagnosis Related Groups (DRG), or Resource Use Groups (RUG). Each DRG has a relative average value assigned to it that indicates the amount of resources required to treat patients in the group,

production ceilings should be adjusted when it comes to a number of contracted services, which will be limited by the imposed budget regulations.

Hospital purchasing mechanism – General ideas

- A key tool in the suggested purchasing mechanism is a ***Contract.***
- The Contract establishes the quantity and the quality of the production healthcare institutions must provide, as well as the price lists. The contracting thus requires an active negotiation process, defining responsibilities for each element in the process;
- Ministry of Health and RHIF as purchasing/paying entitites, plan which healthcare services must be delivered according to the existing budget restrictions and therefore contract the needed services, so that demand is satisfied;
- Hospitals assure that the healthcare is delivered according to the contracted quantity and quality and manage their own activity with an efficiency converging to the contracted prices;
- A price for each line of activity needs to be established, enabling a payment for the activity effectively done instead of cost reimbursment;
- Contracted number of services will of course be just a best possible estimation, because there will always be a certain degree of uncertainity and deviation;
- A convergence value needs to be established. It is a value that covers part of the difference between total cost and total negotiated revenues, depending on the availlable resources. More efficient HCIs have their financing reduced in order to free resources to compensate inefficiency from certain HCIs. This enables a progressive convergence for less efficient HCIs. A single price list for all contracted HCIs needs to exist.

One of the main issues with existing contracts is that there is no option for patients' co-payments in the amount that exceeds refunds that RHIF can provide for the selected service. Our recommendation is that, in future, when healthcare provider that provides the service to the patient has greater estimated costs, or has higher service fee, than the amount of the RHIF refunds, patients are left with the option to cover the difference themselves in a form o f a co-payment. This way of paying for health services contributes to greater equality in providing health care and leads to imrovement of general level of quality in the healthcare system.

For each of the services that are to be outsurced, the exact amount of coverage from RHIF needs to be determined, and that amount shall be directly transferred from the RHIF to the institution that has provided the service, while patients will cover the remaining part, if any.

Collecting data and introducing an IT integrated system can help in planning, monitoring and having a clear picture through adequate report depending on level of reporting.

Healthcare institutions are dominantly oriented in providing health care to the patients in line with their purpose. Although main purpose of these institutions is providing health care,

as compared to all the other diagnosis-related groups within the system. The relative average value assigned to each group is its CMI.

management should establish a very sophisticated financial controlling function in line with best practice for healthcare institutions.
Establishing financial controlling function in HC institutions is very challenging action. It is a change in management perspective and financial function in HC institution. For this action it is very important to establish health base and understanding a purpose of the financial controlling function. Fof financial controlling it is very important to have proper data to analyze, this issue is again linked with IT system and correctness of data.

Finance function should be in compliance with Law requirements to establish financial management and controlling functions. The institutions are also obliged to submit an annual Report on the adequacy and functioning of the established system of financial management and controlling as already mentioned.

Finance function should have consulting role and provide support to CEO of HC institution with focus on:

- Reporting to external stakeholders but also to internal stakeholders
- Control
  - Policies and procedures
  - Treasury
  - Internal control
- Support in making decisions
  - Planing, budgeting and forecasting
  - Cost management and profitability management
  - Assesing and managing financial performances

Financial Reporting

When talking about financial reporting, all HCIs should adopt uniform way of financial reporting in order to make the Reports easily comparable. This way data from financial reports of all institutions in the System could be gathered and compiled in order to have a full picture of money flows, main expenses and revenues as well as business results. This woul insure transparency and easier monitoring of the system in general.

Goal Setting

Each healthcare institution needs to have clearly defined goals that are related to general business strategy of an organization as well as to the budget. Goals that are set should be designed in accordance with SMART concept which means that they are: Specific, Measurable, Achievable, Relevant and Time Bounded.

Risk Management Strategy

Also, organizations need to implement risk management strategy in order to be aware of all risk factors that exist in all the working processes and that can cause any delays or damages inside the organization. There should be a specific framework for identification of risks, their managemet, reduction, reporting and monitoring. Also all working processes and procedures need to be described in detail.

KPIs

Most relevant Key performance indicators (KPIs) need to be determined, and than monitored on a regular basis. Theese should not include only financial indicators, but also performance indicators of employers, management and per institution depending on the area of health care it provides. This way an immediate corrective actions for certain malfunctions of the system could be undertaken and thus provide better fuctioning of each separate HCI and of the system as a whole.

Budget Calendar

Better alignment of planning and budgeting on the institution level and on the state level is necessary, as well as alignment with Budget Calendar and respecting of set deadlines. If this is not possible, then the State Authorities should consider changes in the Calendar, that would make meeting the deadlines achievable.

Incentives for efficient institution management

As previously described, HCIs do not have any incentives for efficient and effective management and achievement of cost efficiency. In our opinion, more efficient institutions should have the option to keep and reinvest funds acquired through savings because this would boost cost efficiency and savings and thus have a positive effect on financial sustainability of the whole system in both the short and the long run.

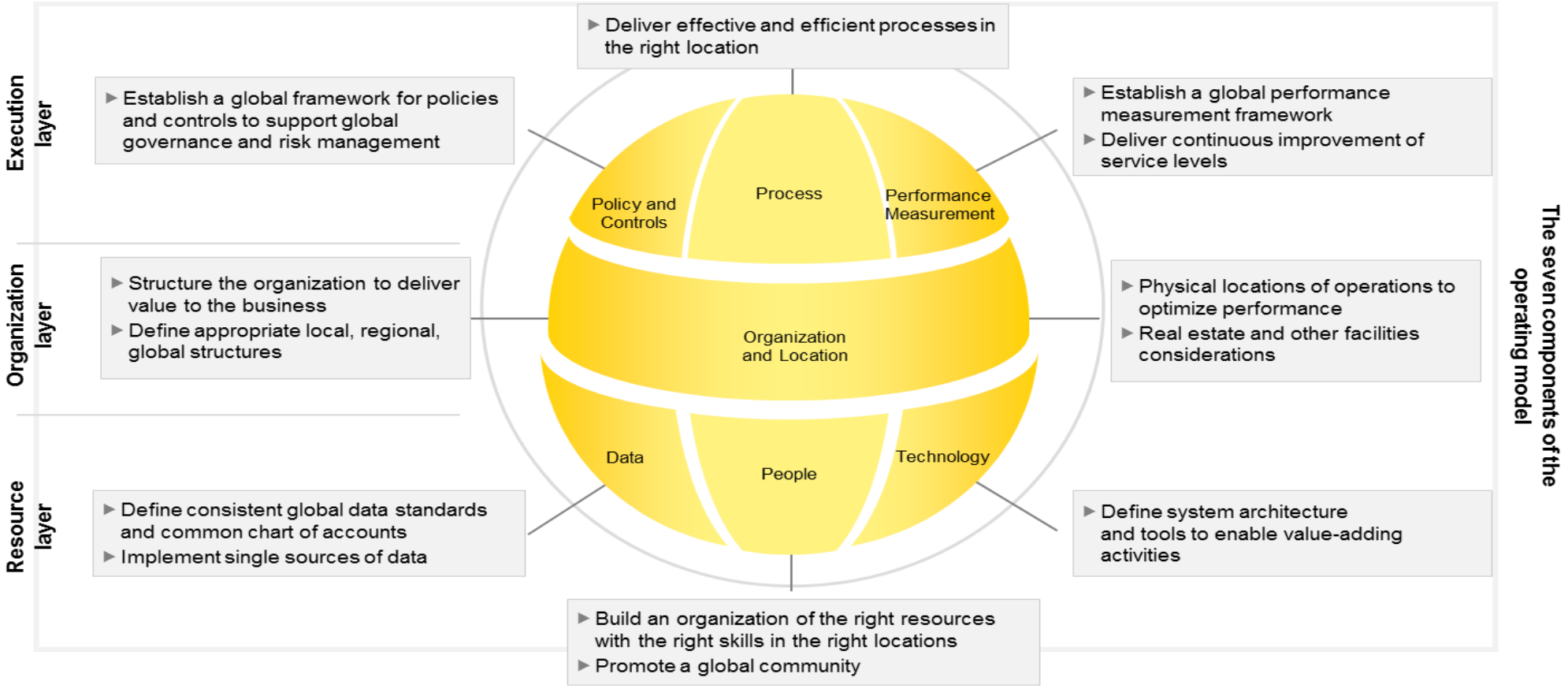
Poor management of public procurement process

Consider establishing a software solution for stock management, and optimization of procurement of medicines and medical supplies (this will be explained in IT recommendation part of the Document). Establish a sustainable liabilities financing method starting from estimations of real needs aligned with real financial capacities. In the end, in order to protect quality of patient health services, it is essential to balance public procurement process and ensure that lowest price cannot be the only decision driver. Quality and technical specifications should play a significant role in making selection criteria.

Number of non-medical staff

According to World Bank data, although coverage of medical staff is within regional norms and in accordance with the level in EU countries, non-medical staff comprises around 25% of the health workforce, which is twice as high as in the OECD countries. In case of primary care centers an average of non-medical staff is 22.9% of total number of employees, from which 16.5% are technical staff and 6.4% are administrative staff.The share of nonmedical staff is particularly high in hospitals. The number of excess nonmedical staff needs to be reduced in order to achieve better payroll cost efficiency and output efficiency. According to World Bank's research if Serbia is to reduce non-medical staff to levels comparable with other OECD countries, average savings could reach up to 0,2 percent of GDP.

Picture 35: Finance operating model



9.2 Inclusion of private healthcare providers in the system

Issue identified:

Low inclusion of private sector, but also low development of private sector in secondary/tertiary level of care.

Description of issue:

Potentials of the private sector are not fully utilized. This also creates barriers for further development of the private sector especially in secondary/tertiary level of health care.

Recommendation:

Possible partnerships between public and private sectors in healthcare

One of the ways for larger inclusion of private sector is that the State and/or RHIF conclude contracts with private healthcare providers and to establish price lists for different exam types. The main idea is that the patient participates in costs, and pays a part and the RHIF would pay the remaining part.

The rules, procedures and price lists established would apply to providers included within the agreement concluded with the RHIF. All providers signing the contract must abide established rules, procedures and price lists in accordance with the agreements in force. The rules, procedures and price lists, should be edited in a single document, and would be subject to further revision in order to ensure the required updates, following the evolution of the healthcare network in Serbia.

Private healthcare providers that are to conclude this type of contracts need to be healthcare institutions accredited by the Agency for Accreditation of Healthcare Institutions in Serbia.

General ideas

Determine price lists/price tables for specific services that will be partially outsourced to the private sector. The prices in the table should be formed in a manner that they already include the value-added tax, and need to be presented in order to identify:

a) the burden to be carried by RHIF and
b) the co-payment of the beneficiary,

for all services that cost above RHIF coverages. Each service should have its specific code. The codes would be used for the provider to bill the amount of the co-payment amount to the beneficiary. The use of these codes requires the provider to submit a medical certificate attesting to the medical condition of the recipient, among other supporting documents

The RHIF would establish a reasonable deadline related to the billing of health services.

A specific procedure for the supporting documents also needs to be established for the purpose of enforcing a requirement or to secure any clarification. There also needs to be a deadline for forwarding these.
The Contractor i.e. Private HCI would provide the RHIF, safeguarding the rules of ethics and professional confidentiality, medical information for audit purposes, including medical reports to justify the provision of health services.

The Provider contracted by RHIF should have the option to

a) Validate the rights of beneficiaries of RHIF;

b) To follow the evolution of its turnover, the regularization of registration, payments and other movements recorded on its current account;

c) Propose the inclusion / exclusion of acts or care;

d) Have access to other services that may be available.

The provider must identify the beneficiary. Identification can be done via health identification card of the patient.

The deadline for paying the invoices of providers will be set in the agreement and will be determined based on the date of entry to register the turnover and the respective supporting documents.

The Provider should have the ability to issue prescriptions to patients, identical to those issued in public care institutions. Also the Provider should have the ability to approve sick leave up to 30 days, in order to reduce visits to physicians in public care institutions

Also, in our opinion private healthcare providers need to be more closely monitored in the system. Currently the state has very little if any data about the number of private institutions per type of service provided, number of doctors/and pharmacists in the private healthcare sector, number of available beds and capacities of private sector.

If private healthcare providers are included into the Network Plan made by RHIF, this would show a better insight into territorial gaps of providing health care country wide. Than it would be easier to plan future investments in healthcare sector according to real needs of population.

Evaluation of potential benefits:

By outsourcing part of the services to Private healthcare providers, the State could significantly reduce expenditures for healthcare in absolute terms. It has been noted that there are unnecessary visits to physicians especially in primary level of care. For example one patient with certain symptoms visits general physician at first. After that the patient goes to see a specialist. After seeing a specialist, the patient than returns to the general physician for another check-up.. Each time a patient visit is being invoiced to RHIF as a specific service provided. If a part of the services would be outsourced to private HCIs, this cycle could be reduced, therefore meaning a reduction in state and RHIF expenditures. The co-payment of the beneficiary could be the difference in price between private and public care HCIs.

Generally speaking, governments enter into PPPs because they are more likely to increase efficiency and thus, provide public services at a lower cost to society.

According to a recent study[57] which has analysed 45% (132 out of 295) acute hospitals in Spain, those hospitals with „non-traditional forms of management" including concessions and public consortia – reported better performance in the relevant efficiency indicators. Further, privately run hospitals save 39% on supplies and report 37% higher activity level with production costs 27% less than that of public hospitals under direct public management.

But when considering this kind of agreements, Government should at first do two tests:

- First, a cost-benefit analysis to determine if the project is justified and viable, and
- Second, a Value for Money analysis against a Public Sector Comparator to justify taking a PPP option.

Then the project sponsors and project creditors analyze whether the project offers an attractive risk return , that is, whether it is bankable. In theory, any PPP structure selected based on this procedure should provide better economic value than the same project would under traditional conditions.

The overall concluison is PPPs provide superior performance in both the cost and time dimensions and PPP advantages increase (in absolute terms) with the size and the complexity of projects.

Paying For Performance (P4P)

Healthcare system in Serbia, as many other health systems worldwide suffers from gaps between best practices supported by evidence and the actual delivery of health services. Many of these quality gaps are readily amenable to improvement, yet they persist in spite of increased levels of health expenditure and numerous other reforms in health care financing, regulation, and service delivery. The quality gaps take many forms, including failure to implement evidence- based clinical practices, fragmentation of services, slow and incomplete responses to adverse indications, and lack of attention to appropriate preventive measures.

Furthermore, the ageing of populations and the rising prevalence of complex chronic conditions has put increasing demands on the health care system and is changing the kinds of services needed. Chronic conditions often require coordinated preventive, curative, and disease management services, provided in a variety of settings, personalized to the specific circumstances of the individual patient.

Such problems could partially be overcome by implementing the DRG system. The Government of the Republic of Serbia has already invested into a DRG Grouper that will ease the implementation of the DRG system. Until this system is implemented we propose introduction of a ***Paying For Performance*** method that will represent a transitional solution until the DRG System is fully implemented.

Traditional ways of paying health care providers – such as salary, fee- for- service, bundled payments, and capitation – do not explicitly reward providers for delivering better quality

[57] De Zulueta J., Circulo de Empresarios, *Un sistema sanitario sostenibile*, Madrid, July 2012.

care. A growing number of new provider payment models are therefore emerging that explicitly seek to align payment incentives with health system objectives related to quality, care coordination, health improvement, and efficiency by rewarding achievement of targeted performance measures. These models are being tested in a wide range of OECD countries.

A key recommendation is that payment incentives for providers needed to be realigned to support quality improvement.

The P4P programs implemented by strategic purchasers of health services in most countries have been used to augment and refine traditional payment systems. Although assuming a variety of forms, the common characteristic of P4P programs is the deliberate adoption of explicit payment incentives associated with metrics for specific objectives, such as higher quality processes of care that follow evidence- based guidelines, increased coverage with preventive services, better management of chronic diseases, and better patient outcomes.

P4P could be presented as “the adaptation of provider payment methods to include specific incentives and metrics explicitly to promote the pursuit of quality and other health system performance objectives.”

To address this topic, it is necessary to have a clear idea of what is meant by ‘quality’ and ‘performance’. Each of these concepts can be measured using indicators of the structure, process or outcomes of care.

Given the current limitations of performance measures, recourse to structure and process indicators is often inevitable, but to use them as measures of quality is valid only if they are known – from research evidence – to lead to improvements in health outcomes.

The key elements of any P4P program typically include:

- a statement of the quality objectives it seeks to promote;
- definition of quality metrics that will influence payment;
- formulation of the associated rules for payment that make some element conditional on measured levels of attainment;
- rules for providers regarding provision of information and other standards;
- and governance arrangements to ensure that the system is working as intended.

Pay for performance programs are based on the premise that if health care providers are paid more for certain behavior, processes, and outcomes, then more of these will be delivered, which will than reduce overall healthcare costs in the future.

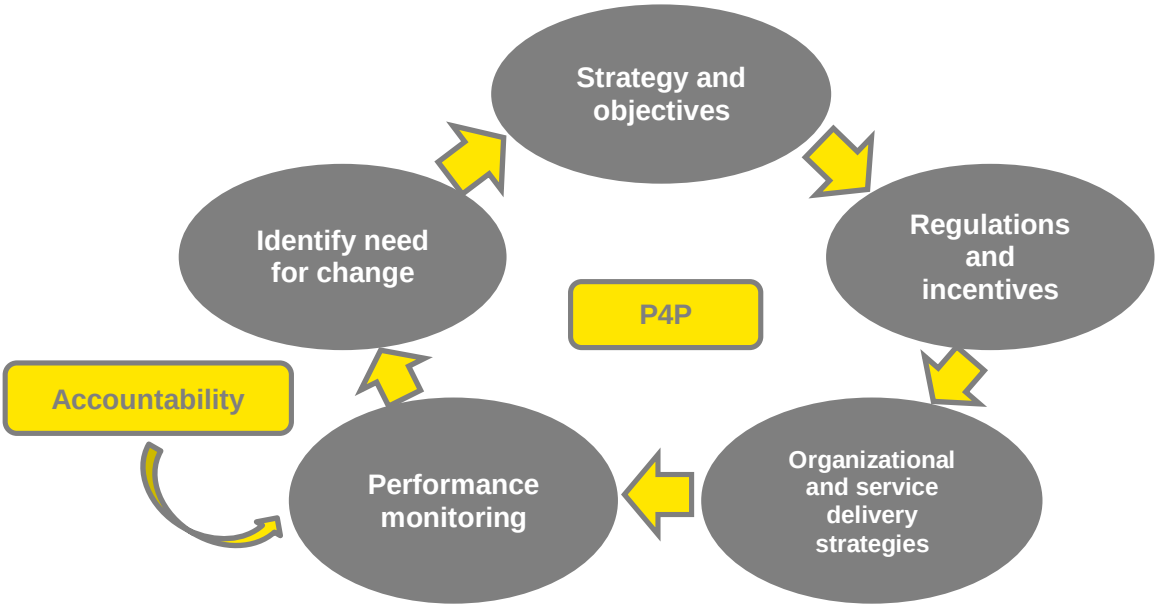
Having in mind that P4P can be a model that increases costs of providing healthcare for the state in the initial phases, while benefits are expected in longer terms, and that Serbian HC system only needs a transitional solution until the implementation of DRG, P4P model implemented in Serbia can be somewhat simplified.

What we recommend is a P4P program that includes coverage of priority services (mainly those services that are on the existing waiting lists and for which there is a necessity to outsource them to private sector) and measures provider’s efficiency.

Payment should be based on the number of treated patients and the therapy given to them and certain incentives to private HC providers could be introduced for achieving lower costs per service. This type of P4P is known as ‘shared savings’.

The goal in this context is to increase utilization for delivering a list of priority services, particularly for high priority services at higher quality.

Picture 36: P4P process



9.3 Prevention and innovative medicines

Issues identified:

1) ***Low level of preventive comparing to curative services has a diverse effect on financial sustainability of the system.***
2) ***Low level of reimbursement for new innovative medicines comparing to other EU countries.***

Description of issues:

1) ***It has been noticed thar even though preventive examinations have increased, they are still below EU average. Diagnosis and treatment examinations are more often than preventive ones. The accent is still on the curative, rather than preventive services.***
2) ***New innovative medicines have low reimbursement rates when comparing to similar EU countres, as explained in the text previously. Insufficient investments in new innovative medicines on the market lead to rising out of pocket expenditures and the financial burden is being transferred to end users of healthcare services, that is patients.***

Recommendation:

In our opinion, in the years to come, Serbian healthcare system focus should be shifted from curative to preventive medicine. Number of screening and preventive examinations needs to be increased. Efficiency in primary care should be stimulated by raising awareness among population about the importance of this type of examinations. In order to boost this type of services, which could lead to significant savings on other levels of health care, government and RHIF need to consider that the first level of outsorcing of part of the services is established on primary level of care. Patients should have the option to have a chosen general practititoner from private HCIs as well.

The best performing OECD countries have achieved good health outcomes with lower bed capacity and admission rates through reforms to reinforce primary and preventive care and rationalize provision of acute and long-term care services. Building up the quality of primary and preventive care through better screening and, for example, treatment of chronic diseases, and promotion of healthier lifestyle reduces healthcare costs in the mid-to long term.

Procedures for reimbursement of new innovative medicines on the market should be simplified, and the number of new innovative medicines that are on the List of reimbursed medicines should be increased, as this type of therapy can significantly reduce other healthcare costs both in the short and in the long run. This is also closely connected with the above mentioned strategy of shifting focus from curative to preventive medicine. Investment and budget reallocation to new medicines will create savings that can be used for other healthcare expenses. New medicines are medicines, with a huge potential to reallocate the budget and provide savings based on better efficiency and better safety profile. New medicines could significantly decrease other healthcare expenditures such as: waiting lists/hospitalization costs; costs of complications and side effects therapy; costs of sick leave

of patients and other. What is most important, this would provide positive results in short term and have an almost instant positive influence on the financial sustainability of the healthcare system in Serbia.

9.4 Reduction of waiting lists

Issue identified:

Long waiting lists and poor flow of patient information among healthcare institutions.

Description of issue:

During our research we have noted that there is a long waiting list for certain procedures. The existence of a significant number of patients waiting for treatment that exceed the clinical acceptable times has ominous consequences not only for the individuals (increasing suffering, reducing treatment success, more complex treatments) but also for the society (more expensive use of resources, higher absenteeism, etc). Also, there is a lack, and in most cases a total absence of coordination between private and public systems due to the use of different architectures and standards.

The access to healthcare is currently being carried out in a non-regulated manner and the integration of the different levels of treatment is inexistent. The citizens do not have the opportunity to participate in the process. The system needs to evolve into a more effective one, where the patient is in the central focus. A global system that integrates the diverse levels of healthcare is essential.

Recommendation:

Proper care treatment is understood as a combination of factors:

- the opportunity (on-time treatment),
- the gains in health (effectiveness),
- the adequate costs (efficiency), and the value felt by the patient.

The need for regulation arises from the fact that healthcare services are a scarce and valuable resource.

All hospital resources such as surgery scheduling, hospital and tertiary beds availability, primary care referencing...etc, need proper and timely management in order to assure the treatment by services in the following terms:

- ***Quality*** - Standards of technical quality of the healthcare services;
- ***Standards*** - Maximum waiting time by medical priority and pathology;
- ***Equality*** - Schedule rules safeguarding medical priority and time waiting;
- ***Process*** - Guarantees of alternative choice if waiting time is 75% of the maximum waiting time established;
- ***Transparency*** - Transparency and guarantee of information quality.

What we recommend is to integrate information systems between all healthcare institutions that execute procedures on waiting lists with every other HCI in the Network Plan, as well with private HCIs in the country, so the proper software tool can pick the data to allow the search for optimal solutions for each patient. This is to assure the equal treatment for each patient in terms of quality, standards, equality, process and transparency. Goals are to reduce waiting time for surgeries/procedures, to apply identical standards to all patients, to profit from good use of resources and, to create a national structure of homogeneous information based on a system of data collection.

The Information model needs to include the following items: information on patients and events to allow process management, clinical information for "Disease Management" and financial data to allow management between health units, from which data is gathered to improve access management. The information should be recorded by hospitals in accordance with a set of standards and integrated into the central database of the software. The quality of integrated information from the hospitals will be guaranteed by a set of tools to validate its consistency, rejecting non-compliant data. The information would be recorded in hospitals throughout the process of managing the patient on waiting lists and integrated daily in the central database.

The designed information system needs to support hospitals, both public and private ones in improving the access to healthcare protection. This information system would integrate the data from all hospitals together, and pick the data to find optimal solutions for each patient. It should allow real time exchange of information to drive decision-making processes. It needs to be clearly defined who produced and signed the information, the minimal data set and all the information to be recorded should be included in the workflow.

There are five main goals to be accomplished:

- create knowledge,
- establish the equilibrium between demand and supply,
- guarantee the equiality in access,
- improve the quality/efficiency and
- tackle sustainability.

The main targets identified are: increasing supply of "surgeries", improving the management of waiting lists (i.e. creating the conditions to improve the use of surgical rooms and teams), supply and demand regulation, process improvement, assess the quality of services provided, guarantee of the access for all citizens and, improving the quality of information.

Also, the problem of waiting lists can be solved in a very short period of time, in a way that the RHIF establishes cooperation with private health care institutions and by subcontracting the services on the waiting lists. Private health institutions should again meet certain criteria including that they have accreditation, qualified personnel and modern medical equipment, and available capacities. These types of agreements already exist and are being successfully carried out between private health institutions operating in Serbia and the state health funds in neighboring countries - ex Yugoslavian republics. This type of contracts usually refer to services in orthopedics such as hip replacement, other orthopedic surgeries, cataract surgery, in vitro fertilization...etc.

The process is imagined the following way: the “hospital of origin” of the patient (HO, the hospital where the patient had the first consultation) classifies the patients according to their priority and tries to schedule a surgery for them on time. But, there is a defined time limit of a certain number of days to the HO surgery department to reply for all cases: The HO must then clarify and declare every lack of capacity for coping with the high priority patients in the list. Therefore, a time limit for the HO to perform the surgery needs to be defined. Otherwise, if HO could not schedule the surgery, the patient must be transferred to another hospital in the network (and accepted by the patient): This destination hospital could be a private hospital on the condition of having a convention agreement with RHIF. The limited maximum waiting time allowed also nees to be defined. The circuit of each patient is always monitored in order to guarantee that the maximum waiting time is never reached.

Evaluation of potential benefits:

Similar system was introduced in Portuguese HC system in 2005. The impact it had overthere could also be translated in reduction time: the waiting time for surgery decreased from 8.6 to 3.4 months, meaning a 60,5% reduction simply being accomplished through better system organization and management. At the same time, this improvement has allowed an increase on patients entrances (meaning an improve in accessibility to surgery) from 426,949 to 560,695 episodes (+31,3%). This was possible because of an increase in scheduled surgery from 345,321 to 475,293 episodes (+37,6%) has been provided.

The results are quite impressive, resulting from a professional application of Integrated software design and implementation principles that allowed the overcoming of communication barriers and the lack of operating rooms management practices.

This, of course, should only be a part of a bigger effort to implement a comprehensive strategy to consistently allow information collection and sharing within Serbian healthcare sector to improve resources usage management. Future work would include both the analysis of the use of the IS itself and on the actual health gains provided with the surgeries.

9.5 Centralization or Decentralization?

Issue identified:

Lack of strictly determined direction of the further development of the system in the sense of either centralization or decentralization.

Description of issue:

During our interviews with the Ministry of Health, we noticed a concern due to lack of clear direction of system development in the future regarding either centralization or decentralization.

By Law on Healthcare from 2005. a decentralized system in founding and providing working conditions to institutions on the primary level of healthcare (health centres and pharmacies) has been established. This has been done by transfering founding rights to municipalities, i.e. cities. Today, institutions on the primary level of healthcare are mostly being founded by local governments, while institutions on secondary/tertiary level of care are being founded by the state. Also, in some municipalities there are HCIs founded both by the state and by the local governments, even though there is not enough demand for their services. Process of decentralization is being followed by Law amendments in Law on Local Governments, but also by changes in the Constitution from 2006. that guarantees that municipalities have the authority in providing healthcare.[58]

This creates an issue when it comes to equality regarding availability of health care country-wide. In some places, there is a situation of unnesessary over-investment in healthcare facilities, while in others, not enough resources and institutions exist to satisfy the demand for healthcare of the local population.

This significantly increases the administrative and bureocratic procedures, while on the other side, reduces the influence the State has in the sence controlling of those institutions, especially the ones founded by local municipalities.

Recommendation:

When considering decentralization, we need to keep in mind that certain things need to stay at the centralized level:

- Basic healthcare policies and legal regulations
- Goals and objectives as well as deadlines for achievement
- Monitoring, analysis and estimation of health condition of the population
- Strategic development decisions

Coordination problems in decentralized systems and the risk of duplication of services and therefore expenses are thus major arguments for centralizing some degree of power.

[58] Sourcer: Serbian Chameber of Commerce – Public-private dialog for susteinable healthcare, November 2015.

In our opinion a Centralized system is a better option for Serbia at this point in time. Currently the State does not have enough funds or resources to go through the decentralization process.

Decentralization at this moment would only create tensions between central and local governments. Inequal delivery of service would be a great issue since not all geographic areas and municipalities are on the same level of economic development, so it would be very difficult to provide equal health care to all the citizens contrywide.

Although decentralized systems could have significant advantages when it comes to improving efficiency, it also requires great investments in facilities, equipment, material and staff and majority of local governments is not able to finance those investments in the short run.

But a decentralized system remains something to be considered in the years to come. With greater involvement of private sector other possibilities are expected to arise. Public private partnerships will become an option even on municipality levels so the costs and financial burden of these systematic changes can be split between the private and public sector.

Below is a list of pros and cons when considering a decentralized healthcare system.

Table 37: Pros and Cons of a Decentralized healthcare system

Decentralization in Healthcare - Pros and Cons	
	
Improvement of technical efficiency through fewer levels of bureacracy and greater cost consciousness at the local level. Decentralization policies may also provide efficiency advantages in terms of reducing the risk of bottlenecks at the central level, thus increasing the overall throughput capacity of the system.	***Requires certain contextual conditions to achieve it. Incetives for managers are needed.***
Increase of allocative efficiency through better matching of public services to local preferences and thorugh improvement of patient responsiveness.	***Increased inequalties among administrative units. Tensions between central and local governments and between different local governments.***
Increased innovation of service delivery through adaptation to local conditions and increased autonomy of local governments and institutions.	***Increased inequalties of service delivery.***
Increased quality of health services through integration of health services and improved access to voulnerable groups.	***Integration of health services and information systems could be a potential issue. Also, it may be difficult to attract qualified personnel to remote areas.***

Increased information about local healthcare issues of the population and better decision making process. Involvement of local communities in decision making processes.	*There are little evidence for this statement, and it is believed that central authorities have better information on population healthcare issues. Centralized collection of information and performance control will still be necessary*
Local liders can be more efficient in allocating limited resources for achieving priorities.	*Local leaders can be exposed to pressures that bring to an increase of costs and inefficiences.*
Quick responsiveness and fast decision implementation. Closer linkages between decision-makers and end users.	*Not enough political control or professionalizm. Issues with maintaining quality and efficiency if decentralized units are too fragmented.*
Better provision of healthcare services and better disperzion of funds according to people's needs, thus reducing inequalities ih healthcare availlability.	*Decentralization may improve some equality measures, but may worsen others. Decentralization may lead to inequality in financing of health systems. Equality and fairness could also be reduces as service and quality will differ across decentralized units depending on local capacities and choices.*
Involvement of local communities in decision making processes.	*Greater risk of political capture by strong industry or interest groups in decentralized units.*
Decentralization creates differentiation and thus possibilities for creating units with preferred service level and payment combinations. This creates higher capacity for innovation.	*Decentralization weakens coordination and creates situations of duplication of services. Drawbacks of small-scale production will reduce efficiency and quality in some cases.*
Decentralization creates opportunities for local adjustment and experimentation with organizational solutions that may spread to other units through systematized learning processes.	*The risk of sub-optimality as decentralized entities focus on their own performance rather than the entire organization.*
Large centralized units will have a higher tendency to rely on formal coordination measures via standardization of input and procedures, while smaller decentralized units are more flexible in terms of ad hoc coordination.	*Spreading decision capacity to several decentralized units may create problems in coordination across these units. Planning of investments and development of treatment facilities may thus become less than optimal. It may also become more difficult to impose common standards and create transparency.*
Internal coordination is easier in decentralized units where administrative hierarchies are less elaborate and several functional areas may be located within the same structure. Locating different services within decentralized structures may lead to improved communication.	*Inappropriate diversity in practices and standards, especially when it comes to personel management.*
Smaller and more decentralized units create better possibilities for controlling performance and holding staff accountable. Motivation may also be higher as employees feel more closely related to the population being treated and the (local) organizations running the treatment facility.	*Risk of over-investment and inappropriate utilization if decision-making is decentralized without some mechanism for coordination.*

9.6 IT Support

Issue identified:

- ***Low implementation of information and communication technologies in all (mainly public) HC institutions and lack of information flows between institutions.***
- ***Lack of control mechanisms that would assure the RHIF that each institution prepares a plan according to its real needs for medicines and medical supplies***

Description of issue:

During our research, we have noticed that information equpiment used in most public care institutions is old and outdated. There isn't almost any electronical information sharing between institutions. Collecting, searching and sharing patitent data is time consuming, bureacratically extensive, inefficient and thus expensive.

Private healthcare providers have a much better IT equipment and usage of it's capacitites is on a very high level.

Recommendation:

Compliance and information sharing between institutions and systems often requires a significant process and technology changes. A good software solution can help organizations maintain up-to-date patient records and patient privacy. This software needs to provide:

- Secure and flexible user authentication that supports a range of methods from passwords to biometric authentication
- A centralized identity and access management solution
- Tools to track and manage all historical data about an individual patient
- Administration and security tools for monitoring suspicious activities
- Role-based access management to control user's access to critical resources and information.

The improvement of the work technology is a very important task that needs to be achieved in the future. The use of modern audio-visual technology and computer resources will enable a better mechanism for resolving problems and citizen demands. Bureaucratic arbitrariness and unnecessary exposure of citizens to transportation costs, loss of work time will be eliminated.

RHIF should be the first to approach this transition. Also, it would be of crucial importance to establish a "paper-less technology" in the future. This means that healthcare institutions will communicate among themselves by using e-mail and documents whose keeping and management will be effective.

The ultimate goal is to introduce electronic documents and communications in all aspects of work.

E-prescription, e-referral, e-scheduling, e-health record and E-consultancy are projects of great importance for the modern healthcare system, therefore investing in their implementation is a priority.

It is essential that conditions are created in the upcoming period so that all patient data can be submitted to a central data warehouse online, and all key communication flows can be realized through electronic communication.

Each healthcare facility needs to have equpiment such as computers, printers, scanners, smart card readers (health insurance card, ID card) and other necessary equipment that speeds up the communication and service provision to patients. This primarily refers to public healthcare institutions, because today, this unfortunatelly is not the case.

Also leveraging the Internet and IT strategies is of great importance for modern healthcare system in the country. Internet is a valuable tool in the healthcare industry. Technologies such as electronic record-keeping tools, and online databases allow healthcare workers to access information quickly. Hospitals can also use Internet for completing tasks such as ordering supplies or transmitting medical charts.

In the end, Internet and good software solutions can help healthcare organizations improve efficiency, profitability and information sharing. Searching through stacks of files for patient information is time consuming. These type of solutions make it possible to access the right information almost instantly. Less time spent searching for information means cost savings and more time for patients and clients, which can result in improved profitability. Sharing information between institutions would be almost instantaneous. Case files, inventory supply lists and perscriptions will be sent electronically, thus saving time and money.

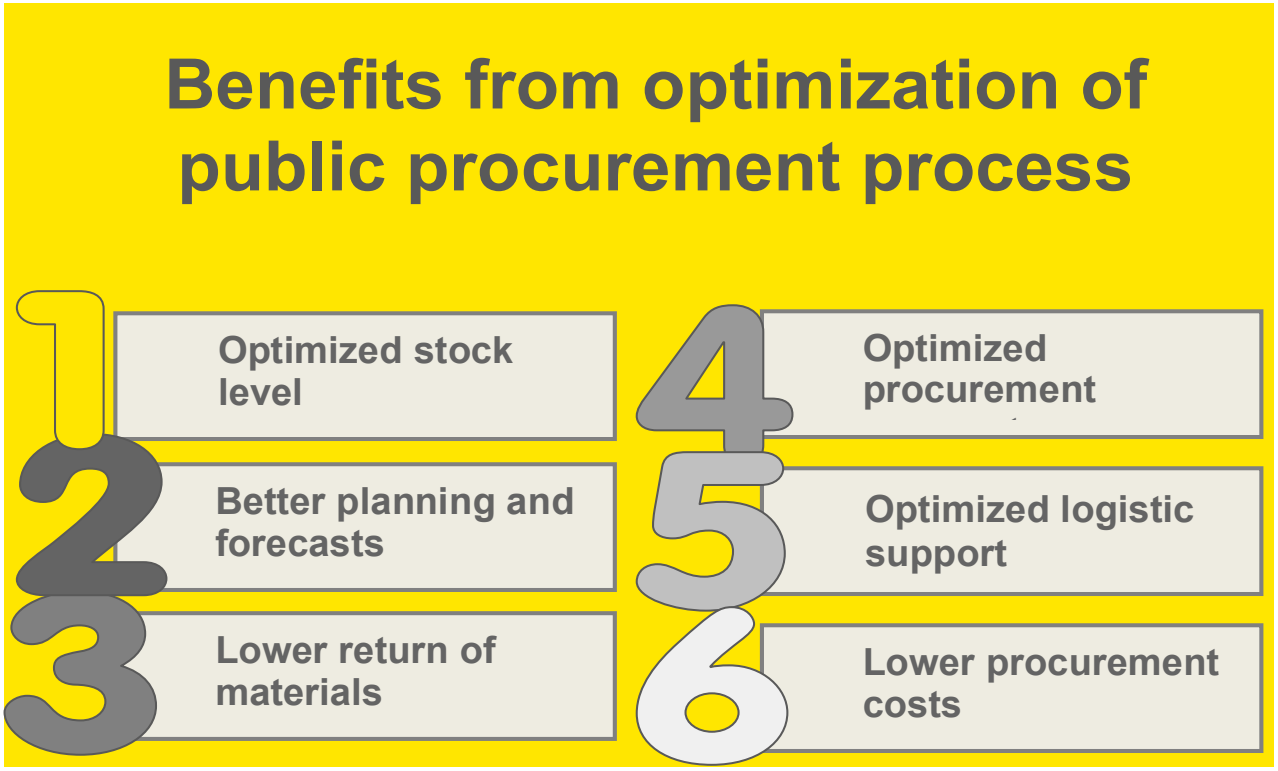
When talking about public procurement of medicines a proper software solution is also a key for monitoring and optimization of stock level in healthcare institutions.

The solution needs to function in a manner that it collects all necessary data about quantities available from each healthcare institution including health centres, hospitals and pharmacies (for perscription drugs) and store all collected data in a central database or server. Private and public institutions need to have connected IT systems that allow data sharing among them. RHIF would than have a real time insight into stock level and could react properly and in a timely manner. Also plans of HCI needs for medical supplies could be created based on statistical and historical data about consumption of medicines and medical supplies in previous year(s), so the plans would than more accurately describe the real needs of each HCI.

Stock management and optimization of procurement of medicines and medical supplies is of crucial importance for financial sustainability of the whole healthcare system. This kind of a solution would help to monitor the prosess of money and goods flow throughout the system through all steps that include:

- Request for procurement of medicines and medical supplies in the HCI plan of needs;
- Plan of centralized public procurements created by Institute for Public Health;
- Procurement of medicines and medical supplies through process of public procurement;
- Distribution of medicines and medical supplies to end location (end user – HCI);
- Issuing and consumption of medicines and medical supplies;
- Return of unused supplies;
- Constant monitoring of stock level;

Picture 37: Benefits from public procurment process optimization



9.7 Voluntary Health Insurance

Issue identified:

Low level of using private (voluntary) health insurance.

Description of issue:

During our research we have noticed that there is a low level of using private i.e. voluntary health insurance. Calculations based on the data availllable from National Bank of Serbia show that only about 12% of citizens have this type of insurance. The problem with the NBS data is that they include travelling health insurance under the voluntary health insurance scheme. According to data acquired from insurance companies, this percentage is significantly lower and it gravitates around 2%. This is an issue in itself because it shows that there is clearly no apropriate monitoring of the VHI market in the country.

Also majority of contracted coverages are for outpaitent services, while hospital services are being covered only in less than one third of contracted policies.

Patients' low purchasing power will continue to hamper the development of the private insurance sector, while the government continues to limit the type and the scope of publicly reimbursed services.

Recommendation:

Evolution and further development of Voluntary Health insurance is extremely important being now an unavoidable reference within the healthcare system worldwide.

As the percentage of contracted polices is far below the European average, that would suggest that the health insurance in Serbia shows potential for significant growth.

In most European countries mainly exist three different types of systems including:

- Reimbursement system – in which health insurance payers have a variety of healthcare reimbursement plans, and carry contracts with individual practices and health systems which are contracts that are periodically renegotiated. It basically functions in a way that upon presentation of evidence the insurance company indemnifies a part of the incurred healthcare costs;
- System of agreements, or managed care, in which the insurance company has an agreed network of professionals or entities engaged in the provision of medical-care, that is available to the policy holder at the time from the time of subbscription of the contract;
- Mixed system, which combines features of both of the above.

Health insurance market has shown a remarkable growth potential. This is due to the high importance that this type of insurance covers in the context of social protection. Despite different national characteristics, comparative analysis with other European countries shows that there is a clear margin for growth and expansion of the health insurance. This conclusion is reinforced by the evolutionary and comparative analysis of the scope of this type insurance in terms of the national population and given the total amounts of current healthcare

spending in Serbia. In order to enhance the introduction of new stimulus to this market, the degree of coverage of the population should be increased on the one hand, while on the other, the supply in terms of creating new products and new subscription models should also be increased. This would provide a better alignment to the actual needs of insured persons, and create conditions for the broader availability of VHI among the citizens. By increasing the number of people that contract voluntary health insurance "out of pocket" expenditures would be reduced. Open communication between private practices with insurance companies and intensive exchange of experiences could also significantly contribute to the development of VHI market in the country.

On the following pages we will try to explain case-study based models of voluntary health insurance in three Central and South-Eastern European countires as possible directions for future development of Serbian VHI Market.

Example of Croatia

The Law of Voluntary Health Insurance („Official Gazette" 85/06., 150/08. and 71/10) divides health insurance on:

- Complementary health insurance
- Additional health insurance
- Private health insurance

Voluntary health insurance Provision of VHI, both by the Croatian Health Insurance Fund (CHIF) and private insurers, is regulated by the Voluntary Health Insurance Act of 2006 (and its amendments). The CHIF must keep the funds for complementary health insurance separate from the MHI funds. All private health insurers must be approved by the Ministry of Health and are supervised by the Croatian Financial Services Supervisory Authority (HANFA).

VHI plans are offered by six commercial insurers (complementary and additional plans) and the CHIF (complementary plans only). The CHIF dominates the VHI market and covers over 2.5 million people out of the total number of 4.3 million people covered under the mandatory scheme .

Complementary health insurance covers the costs of healthcare from compulsory health insurance in which the insured persons shall participate in the amount of 20% of the full cost of healthcare. Complementary health insurance gives the company (insurer) a license to conduct insurance business from the Croatian Agency for Supervision of Financial Services (HANFA). The funds for complementary health insurance must be kept separately from the additional health insurance.

The insurer determines the premium for complementary health insurance, with regard to the scope of coverage of the agreement on complementary health insurance. CHIF general act determines the price of the premium for complementary health insurance on the basis of the

scope of coverage under the contract of complementary health insurance, income-testing the insured person and insured status in the compulsory health insurance scheme.

Additional Health insurance provides a higher standard of healthcare and wider scope of coverages, in comparison with the standard and scope of rights from mandatory health insurance.

Private health insurance provides healthcare to individuals residing in the Republic of Croatia, which are not required to have insurance in accordance with the Law on Compulsory Health Insurance and the Health Care Act for foreigners in the Republic of Croatia.
It is not necessary to explain that these insurace schemes are the most expensive, but also have the biggest coverages.

Additional and private health insurance is provided by the insurance company with the permission from HANFA. Funds for additional health insurance of CHIF must be taken separately from the compulsory and complementary health insurance.

Complementary VHI plans cover all patient co-payments. Additional VHI plans provide services targeted at active people in good health (they cover preventive systematic and cardiovascular examinations; direct access to specialists, diagnostic imaging, laboratory tests and physiotherapy; a better standard of hospital accommodation). Complementary group plans are available to employees at the managerial level (anti-stress programmes, preventive cardiovascular examinations). No VHI plan provides better or faster access to sophisticated therapies needed in case of serious illnesses, for example, oncologic or other major surgeries.

The CHIF enjoys a privileged position in the VHI market: it does not need to have a special company selling complementary policies; it does not come under the supervision of the HANFA as other insurers do; and it does not have to follow other strict rules (i.e. regarding technical reserves, share capital, mandatory audit, solvency rules, etc.) applying to other insurers.

Complementary health insurance may be provided by the CHIF or by private insurers. While everybody may purchase complementary insurance from private insurers, only persons who have membership in the MHI scheme are entitled to purchase complementary VHI coverage from the CHIF. Additional and substitutive covers are provided by private insurance companies (the 2010 amendment of the Voluntary Health Insurance Act gave the CHIF the possibility of offering additional VHI cover but the CHIF has not yet entered this market). VHI plays a small role in financing healthcare in Croatia, accounting for less than 4% of total health expenditures. The prohibition of opting out from the MHI scheme in 2002 constrained the activity of private insurers when VHI was introduced in 2003.

System of complementary health insurance shows a rising trend in the number of insured persons and the significant increase in revenues from additional payments by regular health insurance. Since 2004 the number of insured persons has increased approximately from 730,000 kn to 2.7 mil. in 2010. Until 2008, the number the insured is relatively constant -

about 700,000. Since 2008, the number of insured increases greatly. Along with the growth in the number of insured there was also an increase in income CIHI of complementary insurance. Total revenue per insured grows from 706.00 kn in 2003 to 876.00 kn in 2005.

Example of Hungary

The voluntary health insurance system in Hungary has no substitutive, but only limited complementary and supplementary functions. Buyers opt for private health insurance either to cover services not included in the benefits basket or because they are dissatisfied with their publicly financed care options.

Data from the OECD shows a recent boom in the sector, especially in the case of voluntary mutual health funds, but this should be interpreted with caution, because the data collection methodology does not clearly distinguish between the financing of private commercial insurance and that of mutual insurance funds. In 2009, voluntary health funds still constituted only 7.4% of private and 2.7% of total healthcare expenditures altogether, up from 0.6% and 0.2% in 2000.

Under the communist regime, voluntary health insurance was almost non-existent. After the change of regime, Act XCVI of 1993 on Voluntary Mutual Health Funds created the legal framework for complementary insurance schemes on a non-profit-making basis. By the end of 2009, there were 37 voluntary health funds in Hungary, according to data of the Hungarian Financial Supervisory Authority (Hungarian Financial Supervisory Authority, 2010a). They covered 900 000 residents in 2010 (approxiamtely 9% of the population) compared to only 128 000 in 2001. Their expenditure on services rose from HUF 3.3 billion to 56.4 billion (€12.5 million to €203.3 million) in the same period. In 2008, their total expenditure on services amounted to HUF 39.9 billion (€151 million) (Hungarian Financial Supervisory Authority, 2010b), which corresponded approximately to 2.2% of total health expenditure.

The market structure of the voluntary health funds is highly concentrated. The three largest funds (operated by large financial and private profit-making institutions) hold 42.6% of membership and 39.4% of total financial assets (in comparison, 22 of the remaining 34 funds hold only a respective 4.3% and 4.1%) in 2009.

According to data from Hungarian Financial Supervisory Authority, in 2010, 75.7% of the expenditure on services was spent on reimbursement of pharmaceuticals and medical aids, 15% on supplementary services covered by the NHIFA and 6% on recreational and sport activities. Sixteen percent of all members did not pay their contracted monthly contributions in 2009 and administrative costs as a share of total expenditure on services amounted to 8.7%, much higher than for the NHIFA.

Private profit-making health insurance is even more limited. Some companies offer only insurance at the upper end of the market, but these are mainly income replacement cash-benefit policies for certain illnesses and not real indemnification insurance.

Since 1995, the government has subsidized participation in voluntary health funds with a 30% tax rebate up to HUF 100 000 (€360.4) per year in 2010 (1995/14). However, the main revenue source of the voluntary health funds (87% of total revenue in 2009) are the monthly contributions paid by employers (up to 50% of the minimum wage and subject to tax exemptions for the benefit of the employee) (1995/14). Obviously, the supportive public policy

has had a significant impact on extending both membership and revenue of voluntary health funds.

Example of Czech Republic

Health insurance in the Czech Republic is provided through the country's Social Health Insurance (SHI). The SHI requires all businesses to provide workers membership in one of several health insurance funds, to which both employers and employees contribute. Additionally, the Czech government provides contributions for the unemployed so that essentially the population is universally insured.

The Czech public health insurance system is based on obligatory participation of insured persons. There is no possibility of voluntary participation. Every person is insured individually, there are no derived rights („family insurance") in cases limited to the territory of Czech Republic.

The following persons are obligatorily insured only according to the national law:

- People with the permanent residence in the territory of the Czech Republic (automatically all the Czech citizens)
- Employees of employers based in the territory of the Czech Republic

The following persons are also obligatorily insured on the basis of European social security coordination rules (EU Regulation 883/2004 and 987/09) and principle of equal treatment with Czech citizens:

- Self-employed persons from other EU - countries, active in the territory of Czech Republic and covered by Czech social security legislation
- Employees from other EU states, working on Czech territory for employer based in other EU- country, if they are covered by Czech social security legislation
- Non-active family members of migrant workers from other EU states insured in the Czech Republic.

The Czech health insurance system is administered by seven health insurance companies. The biggest one, Všeobecná zdravotní pojišťovna /The General Health Insurance Company, covers approx. 60% of the population. Its ability to pay is guaranteed by the State. Its activities are governed by a special law called Act on the General Health Insurance Company. The other health insurance companies are governed in their activities by the Act on Employee Insurance Companies. Each insured person can change his/her health insurance company once a year. Health insurance companies are not allowed to make profit. Although it was the original intention that health insurance companies should be competitive in their various services, they don't have much space for their competition at present.

There are regular frame negotiations among the representatives of healthcare providers, health insurance companies, hospital associations, scientific organisations and patient associations. The so called framework contracts are the result of these negotiations. The health insurance companies make their own contracts with particular healthcare providers based on these framework contracts. The health insurance funds serve as main purchaser of healthcare services, and their organizational relationship to the various providers is based on long-term contracts. The conditions set in these individual contracts can be partly different. A healthcare provider can make a contract with more or even with all of the health insurance

companies. Only a very small percentage of healthcare providers has no contract with any health insurance company. Healthcare costs are paid to contracted provider directly by health insurance company (patient mostly doesn´t need to pay any part of the cost to the provider).

The yearly expenses of the Czech health insurance system represent about 9 billion EUR (Overall healthcare expenses represent 10 billion EUR). The average yearly expenses of health insurance funds are about 900 EUR per capita. The financial participation of patients in overall costs of healthcare is about 17 % in average. It concerns medicaments and dental care above all.

Example of Estonia

Health insurance model in Estonia is based on solidarity – all insured have the same rights. In order to become insurant of Health insurance fund in Estonia, a person has to be a taxpayer and that he or she owns the identification number that comes along with the temporary residence permit or a residence permit for employment or as a citizen of EU. Children and pregnant women have the same right as taxpayers.

The system of refunds does not exist in Estonia. If the healthcare provider has a contract with the Estonian Health Insurance Fund, all costs are paid by the Fund. Health Insurance Fund pays a visit to a doctor and a hospital treatment and also covers part of the costs for some drugs. The Fund, therefore, covers the cost of treatment, beside their own contribution to compensate for a specialist visit (up to 5 euros), as well as compensation for hospital treatment (up to 2,5 euros per day). First aid in case of emergencies is free for everyone.

Estonian Health Insurance covers:

- Doctor visit
- Diagnostic tests
- Medical treatment
- Preventive procedures
- Operations
- Technical aids required during, or after surgery

The Fund pays a fee based on the certificate of temporary incapacity for work, which is obtained from a doctor and which is then carried to the employer for review. Sick leave remuneration is 70% of the average daily income, and is paid by the employer from the fourth day since the employee is on sick leave. From the ninth day, sick leave is paid by the Fund. Employer deductions are calculated in accordance with earnings in the last 6 months, while the Fund calculates them based on the income that the patient achieved in the previous calendar year.

The Fund has a statutory reserve for risk, in order to maintain solvency. The legal reserve amounts to 6% of the budget of the Fund, and with it the risk of macroeconomic changes reduces whereby these funds can be used only at the Government's decision. Risk reserve that makes 2% of the budget, minimizes the risks arising from liabilities for health insurance and can be used after the decision of the Fund. Before the crisis strike in 2008, the Fund had 4 times more reserves than was necessary. Precisely this accumulated funds had the intention to cushion the drastic decline in revenue in 2009, when the income of the Fund decreased by 11% in 2009 compared to 2008.

If family members of citizens of the European Union remain in their home country, their health insurance can be covered from the Fund after obtaining a form E109 issued by the Fund after the registration in the country of residence of family members. EU citizens are also insured as long as their European Health Insurance booklet is valid based on the earlier work or other insurance conditions in the home country. In the case of work in the short term, one should check the period of validity of the health insurance, as well as the validity of the European Health Insurance booklet. So, if the health insurance booklet is valid, there is no problem that, during the stay in Estonia, health care is received. If a person is not covered by health insurance in their home country but resides in Estonia for shorter period of time without a residence permit, in that case a person should get private health insurance in their home country until while staying in Estonia.

Employee who is sent for the short term from other EU countries to Estonia, can receive the necessary medical care with a valid European card insurance. In the case of transmission over the long term (longer than one year), the employee is entitled to receive health care under the same conditions as any other insured person in Estonia. The citizens of third countries who come to Estonia in the short term, should be provided by private health insurance or in their home country or in Estonia.

Voluntary health insurance in Estonia

Before 2002, the commercial market for voluntary health insurance has not yet been established, mainly due to various benefits covered by the Fund, but also because of the long waiting times for medical treatment. In addition, private insurance companies are offering health insurance recognition to the smaller segment of the population. Voluntary health insurance that was available at that time, mainly included travel medical insurance, and some foreign insurance companies also provide additional health insurance for their employees to enable them to quickly gain access to specialist services.

Due to poor supply of insurance products on the market at the end of 2002, the Fund began to offer voluntary coverage for those who weren't able to meet the requirements of the Fund.

At the end of 2011, commercial insurers are starting to enter, the market which offered an alternative to the voluntary health insurance. In 2010 there were 15 insurance companies that were offering some type of health insurance. Growing income per capita, as well as the growing expectations of the health system, open a discussion on the potential role of voluntary health insurance that it could have in the future.

As a result of the mandatory health insurance, without the option of dropping out, with reduction in the number of uninsured, the role of additional voluntary health insurance in Estonia is very small and targets primarily persons who are not citizens of Estonia.

Example of Republic of Slovakia

Healthcare system in Slovakia is under the jurisdiction of Ministry of Health of the Slovak Republic. In Slovakia, there are public and private health institutions. All insured have the right to choose a general practitioner who mainly provides basic health care and, if necessary, refer a patient to a specialist who performs more professional medical examination and proposes a method of treatment.

There are two types of health insurance in Slovakia:

- Mandatory public health insurance
- Individual (comercial) health insurance

Those who have the mandatory public health insurance have right on health care and any related services in accordance with the Law on Health Insurance. Public health insurance covers the costs in full or partly, depending on specific conditions.

In accordance with the Law on Health Insurance No 580/2004, mandatory public health insurance applies to any person which residence is on the territory of the Slovak Republic. Proof of health insurance is required in the process of obtaining a residence permit, as previously mentioned.

Mandatory public health insurance does not apply to an individual residing in Slovakia, if he/she:

- Is employeed abroad and has health insurance in the country of employment;
- Is self-employed abroad and has abroad health insurance
- If a person is abroad for a long time (more than 6 months) and have health insurance in the country of employment.

Mandatory public health insurance also applies to persons who are not domiciled in the territory of the Slovak Republic, unless they are insured in another Member State of the European Union or in a State Party to the Agreement on the European Economic Area and the Swiss Confederation, and if:

- He/she is employed in the territory of the Slovak Republic (this does not apply if he/she is employed in the Slovak Republic by an employer who has certain privileges and immunities under international law, or if the work is done outside the employment relationship, on the basis of contracts work)
- He/she is self-employed in Slovakia
- He/she is a student from another Member State, or foreign students/activists on studies in the Slovak Republic, on the basis of international agreements by which the Slovak Republic is bound.

Insured persons on the basis of the Individual Health Insurance are entitled to health services that are established by the Health Insurance Authority. Commercial health insurance is provided in accordance with a special law (Civil Code). The scope of health services is determined either individually or on the basis of health care that is available to foreigners who can not be insured by public health insurance; or as a supplementary insurance (in addition to standard medical care), or a combination of the foregoing.

Commercial health insurance is mandatory for all those who do not fall under the mandatory public health insurance. Commercial health insurance can be obtained from any insurer in the market.

Voluntary health insurance in Slovakia

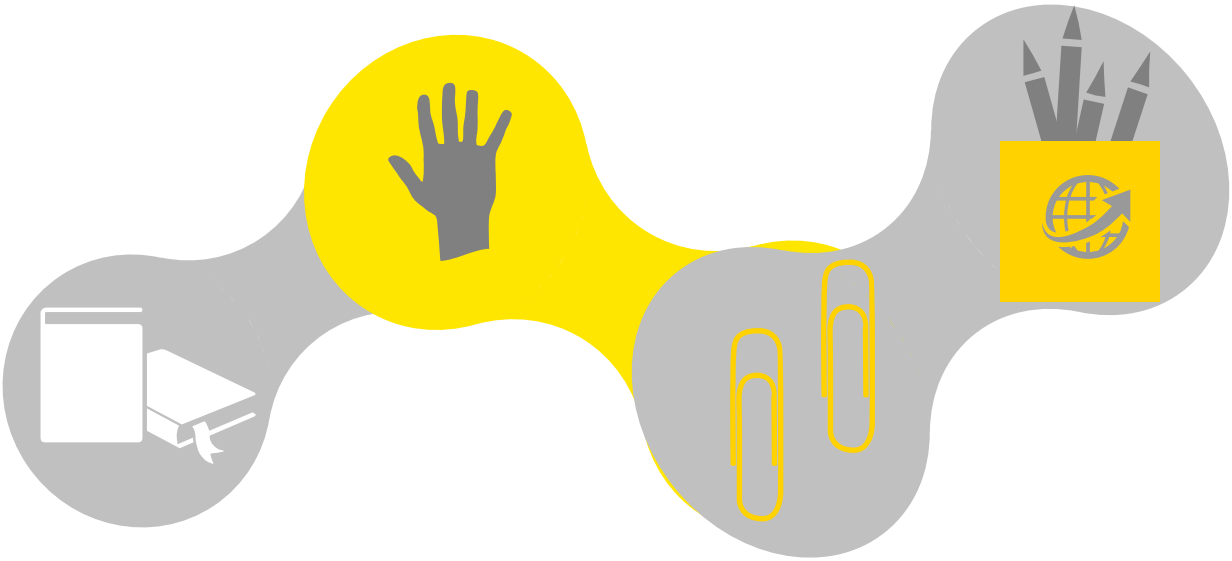
Private health insurance is a part of a system of commercial insurance. Commercial insurance companies can provide policyholders private health insurance and on the basis of that to make a profit. The National Bank of Slovakia is in charge of the control of private voluntary health insurance. So far, the private health insurance had a marginal role due to the large number of exemptions and a lack of an official request for the sharing of costs. According to the National Bank of Slovakia, the total of voluntary health insurance premiums are only about 0.02% of the total cost of treatment and 0.2% of total non-life insurance premiums.

The health system in Slovakia is still in development. Most of the changes in the health care system in 2002-2006 replaced all related laws and introduced a new approach based on individual responsibility and better cope with competition. Funds for health insurance have become a profitable companies, introduced significant budgetary constraints and created a new regulatory and institutional framework. Model was trying to create an environment in which social objectives are being met through encouraging competition. The future of the system depends largely on the political will. Opposing political views may lead to different decisions in relation to the market mechanism and state control. The government whose mandate started in 2010 has promised that the reform of the market will get to the higher level.

X Review of regulatory changes and measures necessary for system improvement

This chapter will be designed based on accepted recommendations.

APPENDICIES



XI APPENDICIES

11.1 Appendix 1: Short review of some key findings from the study "How to do more with less" – World Bank, 2009

In 2009 World Bank published study "How to do more with less" which had a main objective to provide possible solutions and recommendations for improvement of public sector capacities and efficiency.[59]

About the state of public health system there were several main conclusions.

1. Government spending on health system in the period 2000-2008 remained approximately at the same level as a percent of GDP – from 6% in 2000 to 6.3% in 2008. Since this was a period of dynamic economic growth, RHIF spending grew by 23% (in real terms) in the period 2003-2008, while at the same time the budget of the Ministry of Health (intended for prevention, infrastructure and purchase of equipment, as well as payments for health care of vulnerable groups) almost doubled.[60] However, in the analyzed period there was no need for transfers from Republic Budget to RHIF because Fund had positive financial result.
   Total spending for health services (including both public and private sector) as a percent of GDP was somewhat higher than in "new" EU members, but below the level of spending in "old" member countries, and also more-less constant during observed years. Like in most European countries, public spending is dominant, while private sector participated with about one third (participation rate in total spending declined from 34% in 2001 to 30% in 2008).

2. There was a significant improvement of basic health indicators in the observed period. Life expectancy increased from 72 years in 2000 to 73.7 years in 2006, which is nearly equal to EU8+2 average (74 years), and nearly the same as in Hungary (73 years) or Slovakia (74 years).

3. Hospital care has disproportionate share in total healthcare expenditures. Between 2005 and 2008 expenditures for hospitals grew for 40%, which makes them almost two times higher than total expenditures so that they comprise about half of the RHIF budget, which is much more than the average share in OECD countries – 38% outpatient care costs comprise 24% of total expenditures, while in OECD countries their share is 31%

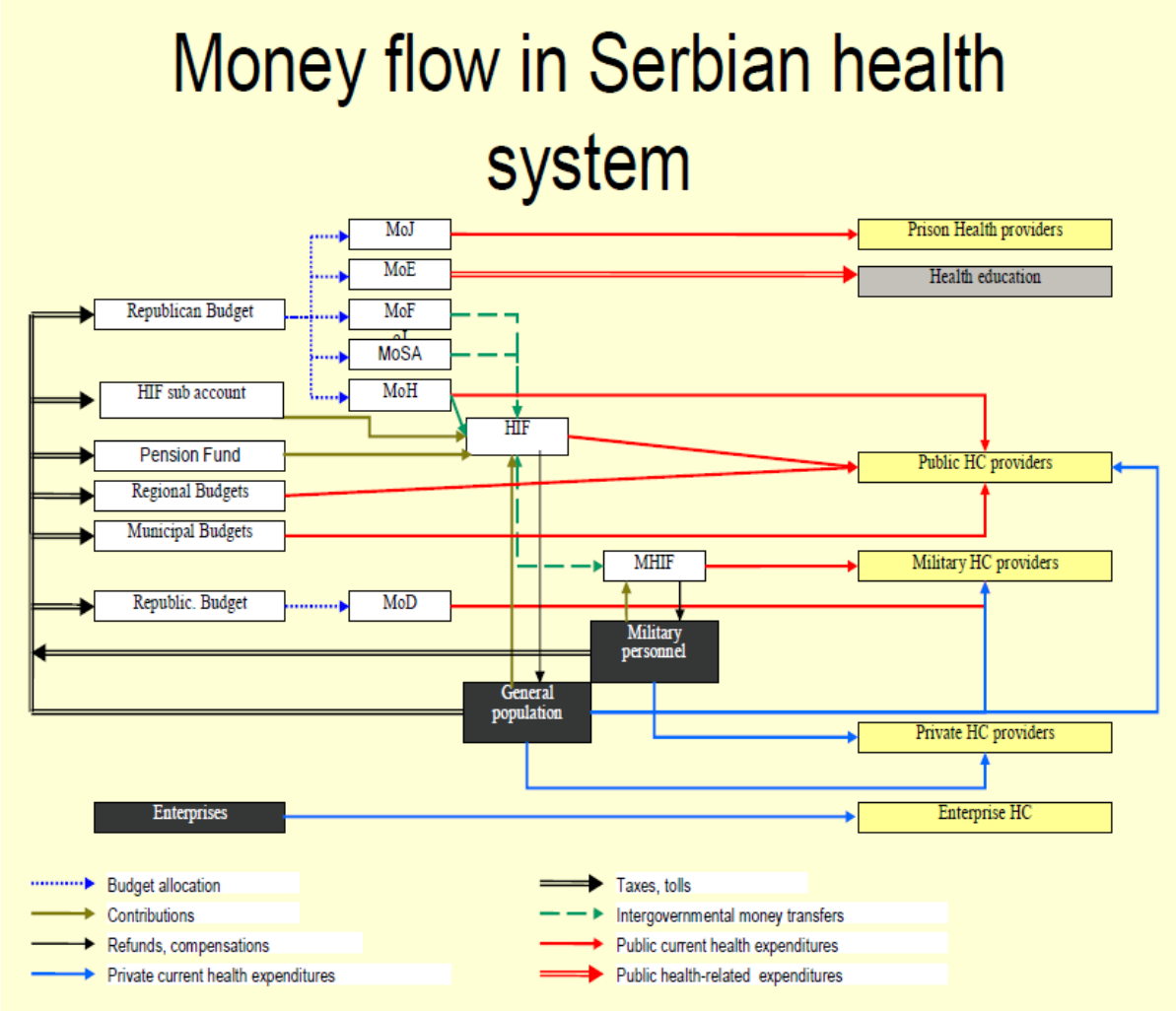
4. Number of beds per 100,000 inhabitants (562) was on the EU15 level (561) and below average in "new" EU members (640). Capacity utilization of 69% is below average in "new" EU members (71%) and well below 78% in EU15. Also, average hospitalization period is longer than in any other country group

[59] https://siteresources.worldbank.org/SERBIAEXTN/.../Serbia_PER_srb_web.pdf
[60] Ibidem, p.24.

5. Although the number of physicians per 100,000 inhabitants is in accordance with the level in EU countries (somewhat higher than in “new” EU members and significantly lower than in EU 15), the structure of physicians is inadequate. There is too large number of primary care physicians. In Europe as a whole, by WHO data there is one primary health care doctor per 3,500 inhabitants, while in Serbia on every 782 citizens there is one doctor. Also, non-medical staff comprises 26% of total staff. In case of primary care centers an average of non-medical staff is 22.9% of total number of employees, from which 16.5% are technical staff and 6.4% are administrative staff.

11.2 Appendix 2: Relationships between participants in healthcare system of Republic of Serbia

Picture 38: Money flow in Serbian healthcare system



Source: Healthcare system and spending in Serbia,Gajic-Stevanović, 2009.

11.3 Appendix 3: Legal regulations of Serbian healthcare system

Regulation of the national healthcare system is covered by several main laws:

1. **The Law on Health Care** ("Official Gazette of RS", no. 107/05, 72/09 8/10, 99/10, 57/11, 119/12 and 45/13); - The Law on health care regulates principles of health care, rights and duties of patients and doctors, conditions for foundation, operating and closure of healthcare institutions in public or private ownership, general interest and public health issues and other issues of national health system. The Law is focused on the public healthcare system and also regulates basic issues of private practice, while other aspects of private institutions conduct are regulated by the Law on business entities.

2. **The Law on Health Insurance** ("Official Gazette of RS", no. 107/2005, 109/2005, 57/2011, 110/2012, 119/2012, 99/2014, 123/2014 and 126/2014); - The Law on health insurance regulates operations of RHIF (collection of contributions, concluding contracts with public healthcare institutions, organization and work of governing bodies, transfers from the Republic Budget and other important questions). Also, in the focus of this Law are basic questions of private health insurance, while other specific topics on this matter are regulated by the Law on insurance.

3. **The Law on Chambers of Healthcare Workers** ("Official Gazette of RS", no. 107/2005 and 99/2010); - The Law on health workers chambers regulates foundation of those chambers, membership, operations scope, organization and other important questions for functioning of chambers of health workers as important professional organizations.

4. **The Law on Medicines and Medical Devices** ("Official Gazette of RS", no. 30/2010 and 107/2012) - The Law on medicines and medical devices regulates conditions and procedure for issuance of permits for marketing authorization of medicine, i.e. enrollment of medicine in registers which is conducted by Government Agency for medicines and medical devices of Serbia, production and trade with medicines and medical devices and supervision in these areas, work of Agency and other important issues.

5. **The Law on Records in Healthcare Area** ("Official Gazette of RS", no. 14/81, 24/85, 26/85, 6/89 and 44/91, 53/93, 67/93, 48/94 i 101/2005) – Law on records in healthcare area regulates basic medical records and aids for keeping records in health care domain, where registering data of national interest and data determined by this Law is being done; also, this Law determines healthcare organizations that collect and process statistical data recorded in the area of healthcare protection and determines deadlines for submitting reports and their processing.

6. **The Law on Public Health** - ("Official Gazette of RS", no. 72/2009) – The Law on Public Health regulates the realization of public interest, by creating conditions for the preservation and improvement of health of the population through comprehensive social activities aimed at preserving the physical and mental health of the population, the preservation of the living and working environment and preventing the influence of

risk factors for the development of health disorders, diseases and injuries and the procedure, as well as the requirements for the organization and implementation of public health.

7. **The Law on Patient Rights -** ("Official Gazette of RS", no. 45/2013) - This law regulates the rights of patients' in the process of using health care, the way of gaining and protecting those rights, as well as other issues related to the rights and duties of patients.

8. **The Law on Sanitary Supervision** ("Official Gazzette of RS", no.125/2004) - This law regulates the activities of sanitary supervision, methods and procedures for sanitary monitoring, determines the areas and objects that are subject to sanitary surveillance and sanitary conditions that such facilities must meet, as well as the powers, rights and duties of sanitary inspectors in the activities of sanitary surveillance.

9. **The Law on Infectuos Diseases -** This law regulates the protection of the population from infectious diseases, determines the infectious diseases that threaten the health of the population of the Republic of Serbia and whose prevention and suppression is of general interest for the Republic of Serbia, determines measures for protection of the population against these diseases, the way they are implemented and the provision of resources for their implementation, supervision over the implementation of laws, as well as other issues of importance for the protection of the population from infectious diseases.

Besides above described main Laws regulating the area of healthcare protection in Serbia, there is also a great number of Decrees, Regulations and Rulebooks that closely define this area, of which the most important are:

1. **Regulation on the National Healthcare Institutions Network** - Pursuant to Article 47 of the Law on Health Care ("Official Gazette of RS ", No. 107/05) the Government adopts the Regulation on the National Healthcare Institutions Network - This Regulation establishes the National Healthcare Safety Network - number, structure, capacity and spatial distribution of health facilities in state ownership and their organizational units by level of healthcare service organization emergency medical services, as well as other issues of importance to the organization of health services in the Republic of Serbia. Geographical distribution of bed capacities and health institutions in the Republic of Serbia is an integral part of this Regulation.

2. **Rulebook on the nomenclature of health services on secondary and tertiary levels of healthcare** ("Off. Gazette of RS ", no. 58/2013) - This Rulebook establishes the nomenclature of health services provided on a secondary and tertiary level, except for laboratory health services that are being determined by the nomenclature of laboratory services at the primary, secondary and tertiary levels of health protection.

3. **Rulebook on the requirements for performing health practices in healthcare facilities and other forms of healthcare providers** ("Off. Gazette of RS ", no. 43/2006, 112/2009 and 50/2010) - This rulebook specifies the requirements and conditions regarding personnel, equipment, facilities and medicines that medical institutions or other forms of healthcare services must meet in order to establish and provide health services, or certain health activities (i.e. private practice).

4. **Rulebook on methods and conditions of conducting additional work of health workers in healthcare institution or private practice** - Pursuant to Article 199, point 6, of the Law on Health Care ("Official Gazette of RS ", No. 107/05) this rulebook specifies methods, conditions and other relevant matters for organizing and conducting additional work of healthcare workers in public healthcare institutions or private practice.

5. **Rulebook on waiting lists** ("Official Gazette of RS" no. 75/2013) – This Rulebook specifies types of healthcare services for which waiting lists have been created, criteria and standardized measures for assessment of the health condition of the insured persons, the longest waiting period for healthcare service, methods for creating a waiting list etc.

6. **Rulebook on accreditation of healthcare institutions** ("Official Gazette of RS" no. 112/09) – This Rulebook defines methods, procedures and conditions for the accreditation of healthcare institutions.

7. **Rulebook on medicines and medical devices advertising** ("Official Gazette of RS" no. 79/2010) - This Rulebook defines the methods of advertising human and veterinary medicines and medical devices.

8. **Rulebook on criteria, manner and procedures for placing or removing drugs from the List of medicines prescribed and issued at the expense of mandatory health insurance funds** ("RS Official Gazette " no. 24/2012) - This regulation establishes criteria, methods and procedures for placing or removing drugs from the List of medicines prescribed and issued at the expense of the compulsory health insurance.

11.4 Appendix 4: Detailed overview of RHIF incomes and expenses

Table 38: RHIF Detailed incomes overview in 2014

REPORT ON THE EXECUTION OF FINANCIAL PLAN OF REPUBLIC HEALTH INSURANCE FUND FOR 2014, 2013 and 2012	1.1.2013-31.12.2014		
	Budgeted	Actual	%
INCOMES AND EARNINGS (total)	220.384.444,00	217.704.001,00	98,78%
Current income	**146.400.000,00**	**147.142.133,00**	**100,51%**
Social contributions	**146.400.000,00**	**147.142.133,00**	**100,51%**
Social security contributions which can not be classified	161.039,00	156.460,00	97,16%
Contributions for social insurance for self-employed and unemployed persons	10.861.519,00	10.961.553,00	100,92%
Social security contributions paid by employees	66.499.280,00	66.770.666,00	100,41%
Social security contributions paid by employer	68.878.162,00	69.253.454,00	100,54%
Donations and transfers	**14.035.322,00**	**9.915.107,00**	**70,64%**
Transfers from other levels of authority	**14.035.322,00**	**9.915.107,00**	**70,64%**
Transfers from budget due to lower contribution rates for HI	10.664.109,00	6.730.000,00	63,11%
Transfers from budget 35% comp. dueto temporary inability to work related to pregn. complic.	1.260.000,00	1.260.000,00	100,00%
Transfers from budget for health care of individuals under Article 22 of the Law	984.679,00	984.679,00	100,00%
Transfers from budget for health care of individuals suffering from rare diseases	335.322,00	335.321,00	100,00%
Transfers from budget based on contributions to HI for certain companies upon Gov. decision	791.212,00	605.107,00	76,48%
Transfers from budget on the basis of tobacco fee			
Other incomes	**1.910.052,00**	**2.881.578,00**	**150,86%**
Property income	**1.500,00**	**1.335,00**	**89,00%**
Interest on funds of mandatory social insurance organizations (OMSI)			
Property income	1.500,00	1.335,00	89,00%
Incomes from sales of goods and services	**708.092,00**	**1.485.102,00**	**209,73%**
Income from the lease by the market organizations in favour of OMSI	11.550,00	8.486,00	73,47%
Income from OMSI for secondary sales of goods and services perf. by non-market Gov. units	665.842,00	1.446.744,00	217,28%
Fees and Charges	30.700,00	29.872,00	97,30%
Mixed and indefinite income	**1.200.460,00**	**1.395.141,00**	**116,22%**
Mixed and indefinite income for the benefit of RHIF	178.000,00	291.439,00	163,73%
Funds of 5% of gross premiums of third part liability (car insurance)	1.022.460,00	1.103.702,00	107,95%
Memoranda items for refund of expenses	**895.000,00**	**775.202,00**	**86,61%**
Memoranda items for refund of expenses	895.000,00	775.202,00	86,61%
Transfers between budget users at the same level	**57.143.000,00**	**56.989.125,00**	**99,73%**
Transfers between organizations OMSI	**57.143.000,00**	**56.989.125,00**	**99,73%**
Contributions for HI of individuals who receive earning compens. during temp. inability to work (sick leave) paid by RHIF	960.000,00	976.614,00	101,73%
Contributions for HI paid by the National Employment Service under Article 45 of the Law contributions for MSI	43.000,00	27.519,00	64,00%
Contributions for HI recipients of cash benefits under Article 224 of the Law of Pension and Disability Insurance	40.000,00	22.002,00	55,01%
Contribution for HI of pension benef. nd benef. of other financial compensations paid by the PDIF for the insured employees	49.600.000,00	49.602.955,00	100,01%
Contributions for HI of unemployed persons paid by the National Employment Service	900.000,00	764.450,00	84,94%
Transfers from the PDIF for self-employed individuals insured for the benefit of the RHIF	2.580.000,00	2.582.878,00	100,11%
Transfers from PDIF for insurnace of farmers for the benefit of the RHIF	3.020.000,00	3.012.707,00	99,76%
Income from sale of non-financial assets	**570,00**	**444,00**	**77,89%**
Income from sale of fixed assets	**570,00**	**444,00**	**77,89%**
Income from sale of property	500,00	429,00	85,80%
Income from sale of other fixed assets	20,00	-	0,00%
Income from sale of moveable assets	50,00	15,00	30,00%
Income from sale of non-financial assets			
Income from borrowing and sales of financial assets	**500,00**	**412,00**	**82,40%**
Income from sale of financial assets	**500,00**	**412,00**	**82,40%**
Income from repayment of loans granted to households in the country for the benefit of of MSI			
Income from sale of domestic financial assets	500,00	412,00	82,40%
Income from sale of domestic shares and other equity for the benefit of the RHIF			
The unspent funds from previous years			
Unallocated surplus from income and earnings or deficit from previous years			
The transferred unspent funds from previous years			

Table 39: RHIF Detailed expenses overview in 2014

REPORT ON THE EXECUTION OF FINANCIAL PLAN OF REPUBLIC HEALTH INSURANCE FUND FOR 2014, 2013 and 2012	1.1.2013-31.12.2014		
	Budgeted	Actual	%
EXPENSES AND EXPENDITURES (total)	- 224.744.444,00	- 220.229.034,00	97,99%
Current expenses	**- 3.742.375,00**	**- 3.353.533,00**	**89,61%**
Expenditures for employees	**- 2.708.275,00**	**- 2.658.719,00**	**98,17%**
Awards to employees and other special expenses	- 24.600,00	- 13.697,00	55,68%
Reimbursement of costs to employees	- 95.000,00	- 76.259,00	80,27%
Benefit in kind	- 3.165,00	- 1.302,00	41,14%
Salaries, allowances, and compensation of employees (wages)	- 2.118.239,00	- 2.116.841,00	99,93%
Social benefits for employees	- 86.510,00	- 71.083,00	82,17%
Social contributions paid by the employer	- 380.761,00	- 379.537,00	99,68%
Use of goods and services	**- 1.014.000,00**	**- 675.401,00**	**66,61%**
Material	- 244.075,00	- 118.915,00	48,72%
Specialized services	- 1.800,00	- 125,00	6,94%
Constant costs	- 378.216,00	- 337.118,00	89,13%
Current repairs and maintenance	- 46.784,00	- 15.978,00	34,15%
Travel expenses	- 17.000,00	- 9.482,00	55,78%
Contract services	- 326.125,00	- 193.783,00	59,42%
Repayment of interest and associated costs of borrowing	**- 20.100,00**	**- 19.413,00**	**96,58%**
Repayment of local interest	- 100,00	- 2,00	2,00%
Accompanying borrowing costs	- 20.000,00	- 19.411,00	97,06%
Donations, grants and transfers	**- 15.000,00**	**- 12.002,00**	**80,01%**
Other grants and transfers	**- 15.000,00**	**- 12.002,00**	**80,01%**
Other current grants by law	- 15.000,00	- 12.002,00	80,01%
Social security and social protection	**- 220.586.500,00**	**- 216.556.556,00**	**98,17%**
Social security rights (OMSI)	**- 220.586.500,00**	**- 216.556.556,00**	**98,17%**
Hospital services (secondary and tertiary health care with institutions outside the network in secondary health care)	- 113.478.267,00	- 112.062.228,00	98,75%
Health Insurance of insured individuals that live abroad	- 22.000,00	- 4.030,00	18,32%
Health care by convention	- 698.000,00	- 696.418,00	99,77%
Daily allowances and travel expenses in the country	- 1.093.000,00	- 1.023.950,00	93,68%
Wage compensation to insured individuals due to temporary incapacity for work	- 9.142.000,00	- 8.768.428,00	95,91%
Other rights from social insurance, which are paid directly to service providers (Institutes of Public Health)	- 2.829.500,00	- 2.237.353,00	79,07%
Other health care services in the country	- 1.170.000,00	- 1.029.005,00	87,95%
Appliances and devices	- 3.160.000,00	- 2.849.771,00	90,18%
Dentistry services	- 5.010.809,00	- 4.890.733,00	97,60%
Delivery costs for insured individuals for medical treatment abroad	- 550.000,00	- 474.970,00	86,36%
Services of hospitals, clinics and outpatient clinics (primary HC with institutions outside the network of primary HC)	- 45.135.866,00	- 44.632.285,00	98,88%
Dialysis Services (material for dialysis)	- 4.481.577,00	- 4.246.228,00	94,75%
Services provided by social protection institutions	- 1.009.993,00	- 984.415,00	97,47%
Rehabilitation services and recreation	- 3.530.000,00	- 3.382.492,00	95,82%
Pharmaceutical services and materials (prescription medication)	- 29.275.488,00	- 29.274.250,00	100,00%
Other expenses	**- 247.069,00**	**- 236.730,00**	**95,82%**
Other expenses	**- 247.069,00**	**- 236.730,00**	**95,82%**
Compensation for injuries or damage caused by state authorities			
Taxes, duties taxes and penalties	- 41.000,00	- 37.880,00	92,39%
Fines and penalties according to the Courts's decision	- 198.569,00	- 191.381,00	96,38%
Compensation for injuries or damage caused by state authorities	- 7.500,00	- 7.469,00	99,59%
Compensation for damages for injury or damage caused by elementary disasters or other natural causes			
Expenditure of non-financial assets	**- 153.500,00**	**- 70.213,00**	**45,74%**
Fixed assets	**- 153.500,00**	**- 70.213,00**	**45,74%**
Real Estate	- 12.000,00	-	0,00%
Machinery and equipment	- 135.000,00	- 64.254,00	47,60%
Intangible assets	- 6.500,00	- 5.959,00	91,68%

Table 40: RHIF Detailed incomes overview in 2013

REPORT ON THE EXECUTION OF FINANCIAL PLAN OF REPUBLIC HEALTH INSURANCE FUND FOR 2014, 2013 and 2012	1.1.2013-31.12.2013		
	Budgeted	Actual	%
INCOMES AND EARNINGS (total)	228.344.000,00	221.210.249,00	96,88%
Current income	161.100.000,00	154.642.719,00	95,99%
Social contributions	161.100.000,00	154.642.719,00	95,99%
Social security contributions which can not be classified	199.447,00	149.966,00	75,19%
Contributions for social insurance for self-employed and unemployed persons	9.873.618,00	9.612.632,00	97,36%
Social security contributions paid by employees	74.131.658,00	71.091.439,00	95,90%
Social security contributions paid by employer	76.895.277,00	73.788.682,00	95,96%
Donations and transfers	1.045.048,00	931.505,00	89,14%
Transfers from other levels of authority	1.045.048,00	931.505,00	89,14%
Transfers from budget due to lower contribution rates for HI			
Transfers from budget 35% comp. dueto temporary inability to work related to pregn. complic.			
Transfers from budget for health care of individuals under Article 22 of the Law	615.048,00	563.794,00	91,67%
Transfers from budget for health care of individuals suffering from rare diseases	130.000,00	120.653,00	92,81%
Transfers from budget based on contributions to HI for certain companies upon Gov. decision			
Transfers from budget on the basis of tobacco fee	300.000,00	247.058,00	82,35%
Other incomes	2.851.911,00	2.881.338,00	101,03%
Property income	900,00	615,00	68,33%
Interest on funds of mandatory social insurance organizations (OMSI)			
Property income	900,00	615,00	68,33%
Incomes from sales of goods and services	1.821.511,00	1.842.786,00	101,17%
Income from the lease by the market organizations in favour of OMSI	10.700,00	10.539,00	98,50%
Income from OMSI for secondary sales of goods and services perf. by non-market Gov. units	1.803.311,00	1.832.247,00	101,60%
Fees and Charges	7.500,00		0,00%
Mixed and indefinite income	1.029.500,00	1.037.937,00	100,82%
Mixed and indefinite income for the benefit of RHIF	129.500,00	67.499,00	52,12%
Funds of 5% of gross premiums of third part liability (car insurance)	900.000,00	970.438,00	107,83%
Memoranda items for refund of expenses	1.180.000,00	1.030.733,00	87,35%
Memoranda items for refund of expenses	1.180.000,00	1.030.733,00	87,35%
Transfers between budget users at the same level	62.163.441,00	61.722.242,00	99,29%
Transfers between organizations OMSI	62.163.441,00	61.722.242,00	99,29%
Contributions for HI of individuals who receive earning compens. during temp. inability to work (sick leave) paid by RHIF	945.000,00	929.561,00	98,37%
Contributions for HI paid by the National Employment Service under Article 45 of the Law contributions for MSI	125.317,00	124.428,00	99,29%
Contributions for HI recipients of cash benefits under Article 224 of the Law of Pension and Disability Insurance	57.500,00	42.788,00	74,41%
Contribution for HI of pension benef. nd benef. of other financial compensations paid by the PDIF for the insured employees	52.632.000,00	52.123.587,00	99,03%
Contributions for HI of unemployed persons paid by the National Employment Service	2.622.824,00	2.760.061,00	105,23%
Transfers from the PDIF for self-employed individuals insured for the benefit of the RHIF	2.632.000,00	2.628.974,00	99,89%
Transfers from PDIF for insurnace of farmers for the benefit of the RHIF	3.148.800,00	3.112.843,00	98,86%
Income from sale of non-financial assets	3.000,00	1.259,00	41,97%
Income from sale of fixed assets			
Income from sale of property			
Income from sale of other fixed assets			
Income from sale of moveable assets			
Income from sale of non-financial assets	3.000,00	1.259,00	41,97%
Income from borrowing and sales of financial assets	600,00	453,00	75,50%
Income from sale of financial assets	600,00	453,00	75,50%
Income from repayment of loans granted to households in the country for the benefit of of MSI	600,00	453,00	75,50%
Income from sale of domestic financial assets			
Income from sale of domestic shares and other equity for the benefit of the RHIF			
The unspent funds from previous years			
Unallocated surplus from income and earnings or deficit from previous years			
The transferred unspent funds from previous years			

Table 41: RHIF Detailed expenses overview in 2013

REPORT ON THE EXECUTION OF FINANCIAL PLAN OF REPUBLIC HEALTH INSURANCE FUND FOR 2014, 2013 and 2012	1.1.2013-31.12.2013		
	Budgeted	Actual	%
EXPENSES AND EXPENDITURES (total)	- 224.744.000,00	- 218.668.829,00	97,30%
Current expenses	**- 3.765.164,00**	**- 3.600.698,00**	**95,63%**
Expenditures for employees	**- 2.814.000,00**	**- 2.774.308,00**	**98,59%**
Awards to employees and other special expenses	- 17.000,00	- 14.745,00	86,74%
Reimbursement of costs to employees	- 78.000,00	- 74.596,00	95,64%
Benefit in kind	- 8.500,00	- 6.414,00	75,46%
Salaries, allowances, and compensation of employees (wages)	- 2.198.393,00	- 2.185.133,00	99,40%
Social benefits for employees	- 101.000,00	- 100.797,00	99,80%
Social contributions paid by the employer	- 411.107,00	- 392.623,00	95,50%
Use of goods and services	**- 946.064,00**	**- 823.205,00**	**87,01%**
Material	- 175.264,00	- 109.096,00	62,25%
Specialized services	- 800,00	- 239,00	29,88%
Constant costs	- 550.000,00	- 518.580,00	94,29%
Current repairs and maintenance	- 30.000,00	- 16.924,00	56,41%
Travel expenses	- 15.000,00	- 12.350,00	82,33%
Contract services	- 175.000,00	- 166.016,00	94,87%
Repayment of interest and associated costs of borrowing	**- 5.100,00**	**- 3.185,00**	**62,45%**
Repayment of local interest	- 100,00	- 2,00	2,00%
Accompanying borrowing costs	- 5.000,00	- 3.183,00	63,66%
Donations, grants and transfers	**- 13.000,00**	**- 12.682,00**	**97,55%**
Other grants and transfers	**- 13.000,00**	**- 12.682,00**	**97,55%**
Other current grants by law	- 13.000,00	- 12.682,00	97,55%
Social security and social protection	**- 220.513.185,00**	**- 214.727.836,00**	**97,38%**
Social security rights (OMSI)	**- 220.513.185,00**	**- 214.727.836,00**	**97,38%**
Hospital services (secondary and tertiary health care with institutions outside the network in secondary health care)	- 112.952.194,00	- 109.951.658,00	97,34%
Health Insurance of insured individuals that live abroad	- 22.000,00	- 4.784,00	21,75%
Health care by convention	- 750.000,00	- 738.588,00	98,48%
Daily allowances and travel expenses in the country	- 1.016.000,00	- 952.843,00	93,78%
Wage compensation to insured individuals due to temporary incapacity for work	- 7.450.000,00	- 7.174.402,00	96,30%
Other rights from social insurance, which are paid directly to service providers (Institutes of Public Health)	- 2.602.205,00	- 2.374.484,00	91,25%
Other health care services in the country	- 1.153.315,00	- 1.050.950,00	91,12%
Appliances and devices	- 3.000.000,00	- 2.754.769,00	91,83%
Dentistry services	- 4.950.184,00	- 4.638.786,00	93,71%
Delivery costs for insured individuals for medical treatment abroad	- 450.000,00	- 431.858,00	95,97%
Services of hospitals, clinics and outpatient clinics (primary HC with institutions outside the network of primary HC)	- 46.211.552,00	- 45.126.948,00	97,65%
Dialysis Services (material for dialysis)	- 4.497.780,00	- 4.400.148,00	97,83%
Services provided by social protection institutions	- 1.073.724,00	- 1.067.644,00	99,43%
Rehabilitation services and recreation	- 3.597.800,00	- 3.281.637,00	91,21%
Pharmaceutical services and materials (prescription medication)	- 30.786.431,00	- 30.778.337,00	99,97%
Other expenses	**- 234.515,00**	**- 219.192,00**	**93,47%**
Other expenses	**- 234.515,00**	**- 219.192,00**	**93,47%**
Compensation for injuries or damage caused by state authorities			
Taxes, duties taxes and penalties	- 32.500,00	- 24.794,00	76,29%
Fines and penalties according to the Courts's decision	- 194.815,00	- 190.592,00	97,83%
Compensation for injuries or damage caused by state authorities	- 7.200,00	- 3.806,00	52,86%
Compensation for damages for injury or damage caused by elementary disasters or other natural causes			
Expenditure of non-financial assets	**- 218.136,00**	**- 108.421,00**	**49,70%**
Fixed assets	**- 218.136,00**	**- 108.421,00**	**49,70%**
Real Estate	- 63.000,00	- 23.009,00	36,52%
Machinery and equipment	- 125.136,00	- 82.095,00	65,60%
Intangible assets	- 30.000,00	- 3.317,00	11,06%

Table 42: RHIF Detailed incomes overview in 2012

REPORT ON THE EXECUTION OF FINANCIAL PLAN OF REPUBLIC HEALTH INSURANCE FUND FOR 2014, 2013 and 2012	1.1.2012-31.12.2012		
	Budgeted	Actual	%
INCOMES AND EARNINGS (total)	212.805.337,00	213.649.777,00	100,40%
Current income	**148.000.000,00**	**147.567.404,00**	**99,71%**
Social contributions	**148.000.000,00**	**147.567.404,00**	**99,71%**
Social security contributions which can not be classified	155.433,00	148.766,00	95,71%
Contributions for social insurance for self-employed and unemployed persons	9.064.882,00	8.601.316,00	94,89%
Social security contributions paid by employees	68.139.759,00	68.164.380,00	100,04%
Social security contributions paid by employer	70.639.926,00	70.652.942,00	100,02%
Donations and transfers	**1.345.048,00**	**1.213.478,00**	**90,22%**
Transfers from other levels of authority	**1.345.048,00**	**1.213.478,00**	**90,22%**
Transfers from budget due to lower contribution rates for HI			
Transfers from budget 35% comp. dueto temporary inability to work related to pregn. complic.			
Transfers from budget for health care of individuals under Article 22 of the Law	615.048,00	615.048,00	100,00%
Transfers from budget for health care of individuals suffering from rare diseases	130.000,00	64.415,00	49,55%
Transfers from budget based on contributions to HI for certain companies upon Gov. decision			
Transfers from budget on the basis of tobacco fee	600.000,00	534.015,00	89,00%
Other incomes	**1.312.205,00**	**2.745.460,00**	**209,22%**
Property income	**105,00**	**204,00**	**194,29%**
Interest on funds of mandatory social insurance organizations (OMSI)	105,00	204,00	194,29%
Property income			
Incomes from sales of goods and services	**607.100,00**	**1.506.706,00**	**248,18%**
Income from the lease by the market organizations in favour of OMSI	7.100,00	10.507,00	147,99%
Income from OMSI for secondary sales of goods and services perf. by non-market Gov. units	600.000,00	1.496.199,00	249,37%
Fees and Charges			
Mixed and indefinite income	**705.000,00**	**1.238.550,00**	**175,68%**
Mixed and indefinite income for the benefit of RHIF	105.000,00	370.022,00	352,40%
Funds of 5% of gross premiums of third part liability (car insurance)	600.000,00	868.528,00	144,75%
Memoranda items for refund of expenses	**662.945,00**	**966.970,00**	**145,86%**
Memoranda items for refund of expenses	662.945,00	966.970,00	145,86%
Transfers between budget users at the same level	**58.820.852,00**	**58.491.551,00**	**99,44%**
Transfers between organizations OMSI	**58.820.852,00**	**58.491.551,00**	**99,44%**
Contributions for HI of individuals who receive earning compens. during temp. inability to work (sick leave) paid by RHIF	865.363,00	882.227,00	101,95%
Contributions for HI paid by the National Employment Service under Article 45 of the Law contributions for MSI	147.689,00	121.775,00	82,45%
Contributions for HI recipients of cash benefits under Article 224 of the Law of Pension and Disability Insurance	54.400,00	48.197,00	88,60%
Contribution for HI of pension benef. nd benef. of other financial compensations paid by the PDIF for the insured employees	49.790.400,00	49.539.215,00	99,50%
Contributions for HI of unemployed persons paid by the National Employment Service	2.440.000,00	2.419.226,00	99,15%
Transfers from the PDIF for self-employed individuals insured for the benefit of the RHIF	2.362.000,00	2.340.789,00	99,10%
Transfers from PDIF for insurnace of farmers for the benefit of the RHIF	3.161.000,00	3.140.122,00	99,34%
Income from sale of non-financial assets	**2.500,00**	**2.867,00**	**114,68%**
Income from sale of fixed assets			
Income from sale of property			
Income from sale of other fixed assets			
Income from sale of moveable assets			
Income from sale of non-financial assets	2.500,00	2.867,00	114,68%
Income from borrowing and sales of financial assets	**450,00**	**710,00**	**157,78%**
Income from sale of financial assets	**450,00**	**710,00**	**157,78%**
Income from repayment of loans granted to households in the country for the benefit of of MSI	450,00	411,00	91,33%
Income from sale of domestic financial assets			
Income from sale of domestic shares and other equity for the benefit of the RHIF		299,00	
The unspent funds from previous years	**2.661.337,00**	**2.661.337,00**	**100,00%**
Unallocated surplus from income and earnings or deficit from previous years	2.578.096,00	2.578.096,00	100,00%
The transferred unspent funds from previous years	83.241,00	83.241,00	100,00%

Table 43: RHIF Detailed expenses overview in 2012

REPORT ON THE EXECUTION OF FINANCIAL PLAN OF REPUBLIC HEALTH INSURANCE FUND FOR 2014, 2013 and 2012	1.1.2012-31.12.2012		
	Budgeted	Actual	%
EXPENSES AND EXPENDITURES (total)	- 212.805.337,00	- 209.677.897,00	98,53%
Current expenses	**- 3.963.125,00**	**- 3.814.585,00**	**96,25%**
Expenditures for employees	**- 2.964.153,00**	**- 2.952.408,00**	**99,60%**
Awards to employees and other special expenses	- 11.500,00	- 9.808,00	85,29%
Reimbursement of costs to employees	- 66.352,00	- 66.352,00	100,00%
Benefit in kind	- 4.372,00	- 1.889,00	43,21%
Salaries, allowances, and compensation of employees (wages)	- 2.363.520,00	- 2.363.520,00	100,00%
Social benefits for employees	- 82.000,00	- 74.430,00	90,77%
Social contributions paid by the employer	- 436.409,00	- 436.409,00	100,00%
Use of goods and services	**- 993.872,00**	**- 860.377,00**	**86,57%**
Material	- 102.543,00	- 92.204,00	89,92%
Specialized services	- 1.800,00	- 253,00	14,06%
Constant costs	- 560.500,00	- 537.711,00	95,93%
Current repairs and maintenance	- 85.500,00	- 20.700,00	24,21%
Travel expenses	- 21.015,00	- 14.129,00	67,23%
Contract services	- 222.514,00	- 195.380,00	87,81%
Repayment of interest and associated costs of borrowing	**- 5.100,00**	**- 1.800,00**	**35,29%**
Repayment of local interest	- 100,00	- 2,00	2,00%
Accompanying borrowing costs	- 5.000,00	- 1.798,00	35,96%
Donations, grants and transfers	**- 10.448,00**	**- 10.182,00**	**97,45%**
Other grants and transfers	**- 10.448,00**	**- 10.182,00**	**97,45%**
Other current grants by law	- 10.448,00	- 10.182,00	97,45%
Social security and social protection	**- 208.543.435,00**	**- 205.701.836,00**	**98,64%**
Social security rights (OMSI)	**- 208.543.435,00**	**- 205.701.836,00**	**98,64%**
Hospital services (secondary and tertiary health care with institutions outside the network in secondary health care)	- 103.704.361,00	- 103.112.461,00	99,43%
Health Insurance of insured individuals that live abroad	- 7.449,00	- 6.449,00	86,58%
Health care by convention	- 540.000,00	- 539.503,00	99,91%
Daily allowances and travel expenses in the country	- 897.288,00	- 853.281,00	95,10%
Wage compensation to insured individuals due to temporary incapacity for work	- 7.285.067,00	- 7.069.067,00	97,04%
Other rights from social insurance, which are paid directly to service providers (Institutes of Public Health)	- 2.058.137,00	- 1.847.136,00	89,75%
Other health care services in the country	- 715.855,00	- 594.854,00	83,10%
Appliances and devices	- 3.782.663,00	- 3.366.662,00	89,00%
Dentistry services	- 4.749.943,00	- 4.709.378,00	99,15%
Delivery costs for insured individuals for medical treatment abroad	- 285.608,00	- 262.607,00	91,95%
Services of hospitals, clinics and outpatient clinics (primary HC with institutions outside the network of primary HC)	- 44.152.346,00	- 43.193.037,00	97,83%
Dialysis Services (material for dialysis)	- 4.030.690,00	- 4.025.391,00	99,87%
Services provided by social protection institutions	- 1.020.579,00	- 930.778,00	91,20%
Rehabilitation services and recreation	- 2.891.463,00	- 2.769.248,00	95,77%
Pharmaceutical services and materials (prescription medication)	- 32.421.986,00	- 32.421.984,00	100,00%
Other expenses	**- 80.541,00**	**- 68.738,00**	**85,35%**
Other expenses	**- 80.541,00**	**- 68.738,00**	**85,35%**
Compensation for injuries or damage caused by state authorities	- 6.000,00	- 2.450,00	40,83%
Taxes, duties taxes and penalties	- 22.500,00	- 19.962,00	88,72%
Fines and penalties according to the Courts's decision	- 52.000,00	- 46.286,00	89,01%
Compensation for injuries or damage caused by state authorities			
Compensation for damages for injury or damage caused by elementary disasters or other natural causes	- 41,00	- 40,00	97,56%
Expenditure of non-financial assets	**- 207.788,00**	**- 82.556,00**	**39,73%**
Fixed assets	**- 207.788,00**	**- 82.556,00**	**39,73%**
Real Estate	- 88.419,00	- 45.407,00	51,35%
Machinery and equipment	- 73.855,00	- 21.090,00	28,56%
Intangible assets	- 45.514,00	- 16.059,00	35,28%

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