

HEALTH CARE SYSTEM IN BELARUS: PATH OF LEAST RESISTANCE

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ABSTRACT

As in other post-Soviet countries, in 1991 the Republic of Belarus started off with a highly centralized Semashko system in healthcare. Over the years of independence, the healthcare system of Belarus has been characterized by great physical and financial access but vast inefficiencies. Using the Harvard flagship approach, we show that there have been no systematic changes in terms of five control knobs of the healthcare system. The relatively minor improvements have concerned anti-alcohol campaigns, improvement of access to healthcare in rural areas, and a shift of primary care to capitation-based financing. As a result, no major improvements of health status have been attained.

Key words: healthcare reform, Belarus, Semashko system

JEL classifications: H51, I15, P46

1. Overview of the health care system in Belarus

1.1. Principal geographic characteristics and a historical overview

According to the Constitution, “the Republic of Belarus is a unitary, democratic, social state based on the rule of law”. The country is situated in Eastern Europe and has a population of approximately 9.5 million people, with less than a quarter living in rural areas. According to the World Bank, Belarus is an upper middle-income country. After the proclamation of independence in 1991, Belarus chose a path of gradual reforms, thereby avoiding a complicated process of economic restructuring; this managed to provide almost a decade of strong economic growth (up to 9% annually) until 2009, when a period of serious turmoil came instead. The period of past growth was accompanied by an emphasis on cheap natural resources and labour instead of productivity and innovations. The country relied heavily on exports to the Russian Federation. Accumulation of external imbalances and liquidity risks, exacerbated by policy of fixed exchange rate and noncompetitive prices, led to grave consequences of the two crises in 2009 and 2011 and resulted in the state’s inability to fully recover. Over the period of 2010-2016, based on the World Bank’s estimates, GDP per capita in PPP (constant 2011 international \$) rose only slightly, from \$16,235 to \$16,742 (Belarus in Figures. Statistical Reference Book. (2016); BTI 2016. Belarus

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Country Report. (2016); Belarus Education, Training and Employment Developments 2016 (2017)).

1.2. The Analysis of the healthcare system after independence in the framework of five control knobs

In 1991 Belarus inherited the Soviet Semashko system, which had two acute problems: high financial inefficiency and inability to combat non-communicable diseases. For more than 20 years Belarus has maintained much of this system, focusing on gradual improvements concerning the main weaknesses of Semashko system. The main commitment remains to provide free and equal access to health services to the entire population. The partial reforms of the healthcare system can be considered within the context of five control knobs: organization, regulation, financing, payment, and persuasion (Roberts et al, 2003).

Organization

The healthcare system in Belarus has a highly centralized, hierarchical structure. The overall functioning of the system is the responsibility of the Ministry of Health (MoH), although it directly funds only tertiary services; primary and secondary care are funded at the regional level, which officially owns the state hospitals as well as all polyclinics and FAPs within their region. In general, hospitals still have very limited capacity in terms of managerial and financial decision-making. Although Belarus introduced the speciality of general practice in 1991, General Physicians (GPs) are widely accepted only in rural areas (Suhrccke et al. 2009; World Health Organization, 2009).

Many ministries still maintain their own parallel healthcare systems despite the gradual process of their absorption into the main health system since 2005.

Regulation

The MoH also has the main regulatory role in the health system of Belarus. It is the primary agent in development and implementation of all nation-wide health programmes and initiatives. During the years of independence, the state has introduced a range of directives concerning the healthcare system, including the Law on Healthcare System (1993), three 'Concepts' on the development of health care, etc (Eurohealth, 2015).

As for quality regulation, since 2001 all healthcare facilities must be licensed by the Licensing Committee of the MoH, and the Advisory Council on Clinical Protocols in the MoH overviews the quality of the services delivery through revision of clinical protocols. Overall, regulation is done through very detailed accounting procedures and a range of norms and standards, rather than through contracting.

In 2011 a Pharmaceuticals Manufacturing Department was created for the governance of pharmaceuticals. Good Manufacturing Practices (GMP) implementation has been on the agenda for over five years but is still not implemented in the country (Rechel et al., 2014).

Financing

The healthcare system in Belarus is, in principle, funded through general taxation. Public health insurance has not been introduced. According to World Health Organization (WHO) estimates, the share

of GDP spent on health has remained relatively stable over 2010-2014 at about 5.5%. Since independence, local funding for primary and secondary services has strengthened, which has resulted in inequalities in health financing between richer and poorer areas.

In comparison with other former Soviet countries, the proportion of out-of-pocket payments (OOP) as a proportion of total health expenditure in Belarus has always been low (around 20% in 2012). Shares of voluntary health insurance and foreign aid in total health expenditure were negligible.

Payment

After adoption of the Decree on the Improvement of Financing Mechanisms in Health Care (2000), primary care became fully capitation-based, while most of the hospitals of secondary and tertiary care are still tied to line-item budgeting (although capacity beyond a benchmark is not rewarded). Transition to a certain kind of output-based funding is being repeatedly discussed, but has not been officially implemented.

In Belarus health workers in the public sector are salaried based on a centrally determined salary scale. Then certain adjustments that reflect, in particular, the number of years of work experience and post responsibilities are made. State Programme for the Revival and Development of Rural Areas provides general physicians with additional bonuses. In 2002 the document was issued that introduced a form of output-related payment for GPs: they could earn a bonus of 40% if targets were achieved on the numbers of ambulance visits, the proportion of all contacts treated by themselves, and other output indicators. In 2013, a pilot project was launched in two regions, under which a system of economic incentives was developed, based on quality (performance) indicators for rendering medical care.

Persuasion

In Belarus, the issue of unhealthy lifestyle is high on the agenda. In particular, a lot of attention is paid to prevailing alcohol consumption, as Belarus is in top-10 in terms of annual alcohol consumption in litres per person (17.5 litres on average over 2008-2010), which is proved to have adverse health consequences. In 2000 a state 'concept' to prevent hazardous alcohol consumption was established, and later four state programmes for national action to prevent harmful use of alcohol were introduced (the latest one is for the 2016-2020 horizon). By the estimates of Belstat, the programme that covered 2011-2015 managed to reduce the average consumption by more than 20% (from 13.3 to 10.46 litres).

2. Analysis of the interim results: any luck?

2.1. Three interim results of the health system: efficiency, access, and quality

Efficiency

It is hard to estimate efficiency through popular indicators, such as number of acute care hospital beds and average length of hospital stay when the relevant data are simply unavailable. Despite visible improvements, such as reduction of expenditures on inpatient services in total expenditures by 16 pp over 2000-2010, it can be argued that the system should still address the following issues:

- 1) High number of unused facilities. The parallel healthcare system has not been yet fully absorbed,

and research institutes and teaching institutes have their own beds. Based on World Bank (WB) estimates, Belarus still allocates more hospital beds per capita than any other post-Soviet country. Comparison to several other countries can be seen on the Figure 1.

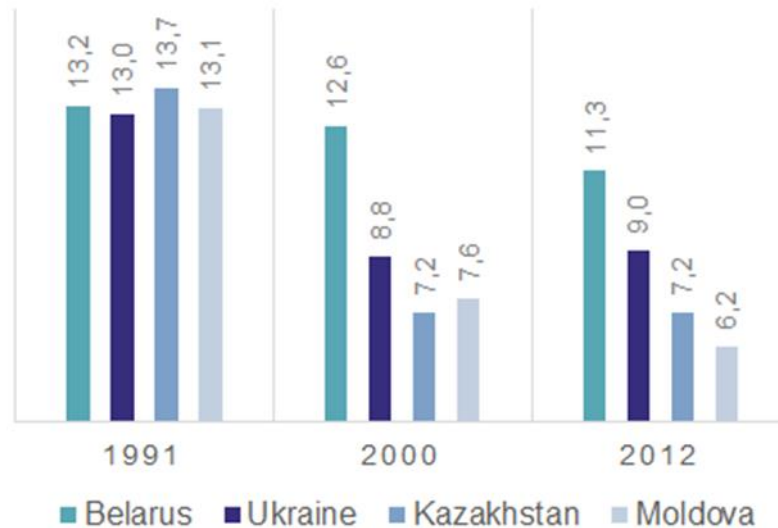


Figure 1. Hospital beds (per 1,000 people) for four post-Soviet countries
Source: constructed based on World Development Indicators (World Bank n.d.)

- 2) There is an overload of professionals at secondary care facilities and a shortage at the primary level of both general practitioners and nurses (doctors' assistants).
 - 3) Emergency care has not been fully optimized and the service often ends up performing non-emergency services without the subsequent hospital admissions.
 - 4) Since access to healthcare is free and universal, Belarus still faces the problem of overuse of healthcare facilities. It is reflected in 13.1 outpatient contacts per year in 2011, which is the greatest number in the whole of Europe and CIS.
 - 5) The use of generic drugs is limited because both patients and doctors lack trust in them.
- The most significant efficiency improvement has been a gradual shift from an input-based budgeting to capitation-based financing and reallocation of local budget from richer to poorer regions.

Access

The access to public healthcare remains universal by law, but both the physical and effective availability suffer from several flaws. Although an even geographical distribution of healthcare facilities is present, primary care lacks its gate keeping functions and is widely usurped by narrow specialists in polyclinics, especially in urban areas. The State Programme for the Revival and Development of Rural Areas (2006) introduced the primary care model in rural area with general practitioners, but with its limited funding, it still faces notable labour shortages despite the reintroduction of compulsory placements in 2008.

Despite the low proportion of OOP in total health expenditures, the population also faces some restrictions in terms of financial access when speaking about purchases of pharmaceuticals. Full

reimbursement for state-guaranteed drugs is possible only for purchases made in state pharmacies, which are not provided with sufficient volumes.

Quality

Quality of healthcare is a hot topic for decision-makers in Belarus and its current level is hard to assess since data on indicators such as avoidable hospital readmission rates, patient-reported outcome measures, and patient safety indicators are not routinely collected. On the state level, quality of healthcare is assured by strict medical and administrative instructions, multiple inspections, and detailed reporting. Reporting forms are often numerous due to the existence of multiple data collection systems but there is no procedure of verification by independent body (Grigoriev, 2011).

Without analysis of quality indicators, some insight on the quality of services may be drawn from the fact that Belarus experienced the growth in the volume of high-tech services (e.g. hip replacement, complex heart surgery, and organ transplants). Along with comparatively low prices this made Belarus a popular destination for health tourism.

2.2. A glimpse into the future: potential for improvement of health services delivery

In November 2016 the ‘Health System Modernization Project’ was launched. This initiative is funded by WB (full commitment) while the MoH is responsible for its implementation. The principal aim of the project to enhance certain areas of health service delivery in the country. The four main components are: 1) establishing E-Health and clinical decision-support systems; 2) improving clinical competencies of healthcare providers in non-communicable disease management; 3) supporting the modernization of neonatal care at the Republican center of mother and child; 4) supporting the project management unit (responsible for day-to-day project implementation and technical advisory support) at the national level. This initiative is expected to contribute to improvement in the quality and the coordination of health care system, as well as efficiency of government spending through various channels, including faster illness diagnosis, direct reduction in medical costs through decreasing the number of days of hospitalization, reduction in costs that result from overlapping drug administration and examination, and others.

3. Three ultimate outcomes of the Belorussian health system

The ultimate deliverables of the Belorussian health system can be analyzed using the Harvard flagship approach. Three ultimate outcomes should be considered: health status, citizen satisfaction, and financial protection.

Health status

Mortality rate, life expectancy, and number of years of healthy life lost were chosen to describe the situation with the health status in Belarus. The mortality rate for females demonstrates a smooth decline over the last decade. In 2013, the female mortality rate was almost three times less than for males, despite the significant decrease of the male mortality rate between 2002 and 2013 (from 383.5 to 273.8 respectively, per 10,000 adults). The greatest improvement in the mortality rate was achieved in neonatal care after 1994. The efforts to upgrade the equipment in maternity hospitals reduced neonatal mortality,

and in 2016 it was equal to 1.5 deaths per 1,000 live births (compared to 8.3 in 1994). There is potential for a decrease in the adult mortality rate through eliminating the causes of the premature deaths.

According to Global Burden of Diseases (2010), ischemic heart disease and stroke are the most widespread causes of premature death. From 1990 to 2010 the situation worsened with alcohol use disorders (87% increase), mechanical forces (90% increase) and cirrhosis (272% increase). While in Ukraine HIV/AIDS and tuberculosis are the major threats for health, communicable diseases do not make the top-10 causes of death in Belarus (Table 1).

Table 1. Top-10 causes of premature death in Ukraine and Belarus, 1990 and 2010

Ukraine 1990	Belarus 1990	Ukraine 2010	Belarus 2010
1 Ischemic heart disease	Ischemic heart disease	Ischemic heart disease	Ischemic heart disease
2 Stroke	Stroke	Stroke	Stroke
3 Lung cancer	Road injury	HIV/AIDS	Self-harm
4 Road injury	Congenital anomalies	Cirrhosis	Road injury
5 COPD	Self-harm	Self-harm	Lung cancer
6 Self-harm	Lung cancer	Lung cancer	Alcohol use disorders
7 Stomach cancer	Stomach cancer	Road injury	Cirrhosis
8 Congenital anomalies	COPD	COPD	Stomach cancer
9 Colorectal cancer	Lower respiratory infections	Tuberculosis	Mechanical forces
10 Lower respiratory infections	Drowning	Colorectal cancer	COPD

Note: black for non-communicable diseases, red for communicable diseases, green for injuries

Source: The Global Burden of Disease Study 2010

The Republic of Belarus was among the countries that achieved Millennium Development Goals set by the local UNDP office in terms of reduction of maternal and child mortality and mother to child HIV transmission. The large increase in vaccination coverage rates for basic diseases (from 92 in 2001 to 98 in 2010) contributed greatly to the decline in child mortality and can be a sign that the quality of preventive care increased (Institute of economic research under the Ministry of economy of Belarus, 2010).

Life expectancy demonstrates minor improvements since independence. After more than 25 years, the achievements do not look impressive: life expectancy increased from 75.6 to 78.9 years for females, and from 66.3 to 68.4 for males. At the same time, in Ukraine the life expectancy improved by only one year for both sexes and equalled 76.3 and 66.4 for females and males, respectively, in 2015.

Citizen satisfaction

Citizen satisfaction with the healthcare system can be analyzed using indicators of life in Transition Survey (LITS) in Table 2.

Table 2. Summary on LITS dataset: Satisfaction

Question	Answers	Belarus		Ukraine	
		2010	2016	2010	2016
Satisfaction with public health service	Satisfied or very satisfied	42.6	51.3	32.4	39.0
Availability of drugs	No drugs	19.0	34.4	31.1	58.4
Long waiting times	Yes	53.0	71.2	36.0	58.0
Facilities not clean	Yes	4.9	8.4	6.1	7.0
How would you assess your health?	Good or very good	38.1	36.1	32.0	37.7
Health services should be the priority for additional government spending	1st priority	41.0	26.7	41.8	33.4
	2nd priority	26.2	30.6	25.7	26.2
How often do people like you have to make unofficial payments?	Always	7.2	1.4	16.0	3.6
Used health service for past 12m	Yes	76.5	60.1	70.2	50.0
Why did you make an informal payment for services if it should have been free?	I was asked to pay	0.8	2.5	10.0	30.0
	I was not asked to pay but I knew that I must	4.4	17.5	13.6	21.0

Source: Authors' calculations based on Life in Transition Surveys II and III (Steves et al. 2011, European Bank for Reconstruction and Development 2016)

The results from the LITS are ambiguous:

- 1) The overall level of public satisfaction in Belarus is steadily quite high. Out of those who used public healthcare in Belarus in 2010, 27% were unsatisfied and 56% were satisfied. In 2016, 18% were unsatisfied and 51% were satisfied. In Ukraine, to compare, satisfaction is much lower, with 34% unsatisfied and only 40% satisfied respondents in the latest year.
- 2) The foremost problems encountered in public hospitals were long waiting times (71% of respondents agreed on that), absence of drugs (34%), and disrespectful treatment by staff (30%).
- 3) In 2016, people assess themselves as less healthy than in 2010 in Belarus. Meanwhile, in Ukraine since 2010, the share of people who think that their health status is good and very good increased by almost 6 p.p.

- 4) 20% of respondents thought that health is the most important problem that the government should address in 2016, while in Ukraine this figure was 12%. Also, health care was thought to be the priority for extra government spending by the largest group of respondents (26%), with the most 'voters' being the elderly.
- 5) The significant difference between Ukraine and Belarus can be noticed by looking at the unofficial payments. Both countries experienced a decrease in the share of people who always use unofficial payments. However, in 2016 this indicator is still higher in Ukraine (3.6%).
- 6) Recently the use of public healthcare facilities has dropped from 80% to 60%. This may be an indicator of citizen dissatisfaction and lack of trust in public healthcare, but may also result from other reasons. In Ukraine, to compare, only half of respondents used public healthcare in 2016.
- 7) Out of those 80% who used public healthcare in 2010, only 26% made informal payments, compared to 51% in Ukraine (LITS III). 46% of them did that voluntarily to express gratitude.

Financial protection

The situation with financial protection in Belarus is ambiguous. On the one hand, OOP spending is by far the lowest in the CIS. It remained 1.5-2 times lower than in Ukraine (Figure 2) for several reasons. First, government health expenditures per capita were relatively high. In 2012, the Belarusian government spent an average of \$555 per citizen on health, while Ukraine spent \$308. Second, areas where patients pay for services out of pockets are tightly regulated, and fees are fixed. Third, according to Transparency international, Belarus was more successful than Ukraine in combating corruption, so informal payments to doctors remained rare (Table 2).

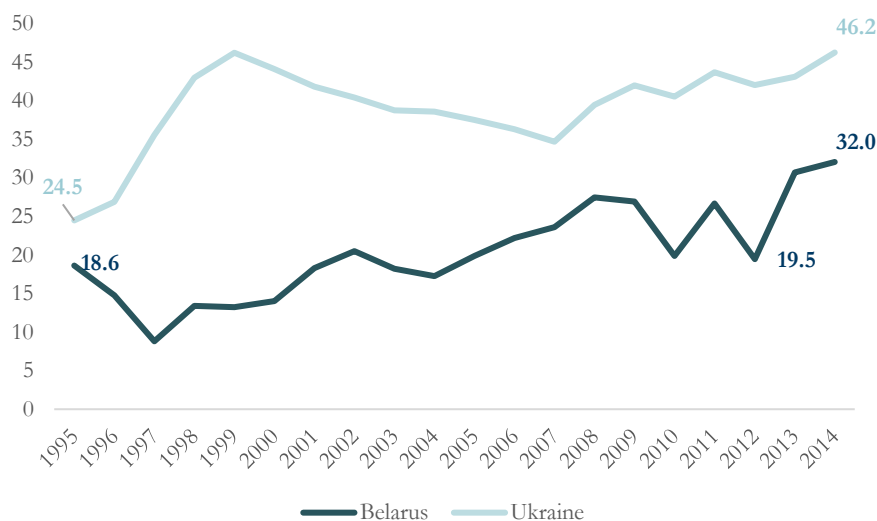


Figure 2. Out-of-pocket health expenditures in Belarus and Ukraine (% of total expenditures on health)
Source: constructed based on World Development Indicators (World Bank n.d.)

On the other hand, out-of-pocket payments remain a problem in Belarus due to the low paying capacity of the population. The major source of OOP (73%) was drugs. To protect from rising costs of medicines, the agreement has been signed between the Ministry of Health and leading medicines

producers and distributors to protect against devaluation shocks in 2011. It can be argued that this was one of the reasons for the decline of OOP to 19.5% of total expenditure on health, as can be seen from Figure 2. Despite this initiative, in 2013-2014 devaluation continued, and the level of OOP increased dramatically to 32%.

The purchasing of pharmaceuticals and other medical goods was one of the major issues for the healthcare system. According to the Health Systems in Transition and the national survey conducted by the Belstat National Statistical Committee of the Republic of Belarus, in 2011 '14.4% of the population could not obtain the pharmaceuticals and other medical goods they needed, at least once in the previous year' (Richardson et al., 2013). The main reason for not obtaining medical goods was high prices (62.1% of respondents).

According to LITS, in 2010 7.6% of individuals had to postpone a visit to the doctor in case of illness because of financial constraints and 4.9% of citizens were forced to stop buying regular medications. The latest data demonstrates that in 2016, 30% of individuals spent more than 30% of their income on healthcare.

For a deeper analysis, we took the indicators of risk of catastrophic and impoverishing expenditures for surgical care from the The Lancet Commission on Global Surgery. In 2014, the share of people at risk of catastrophic health expenditure (defined as direct out-of-pocket payments for surgical and anaesthesia care exceeding 10% of total income) is almost three times higher than the share of people at risk of impoverishing health expenditures, which drives people below a poverty threshold (using a threshold of \$1.25 PPP/day). Compared with Ukraine, Belarus performed better in terms of financial protection, especially in case of risk of impoverishing expenditures: the share of Ukrainian citizens at risk of it is two times higher.

4. Conclusions and lessons for Ukraine

Only point incremental changes were implemented in terms of five control knobs since independence. Due to a programme for the development of rural areas, access to healthcare and quality of services there improved notably. The financing based on capitation was introduced for primary care. The government reacted to the high prevalence of alcohol use disorders among top causes of premature death and implemented several programmes to promote a healthier lifestyle. As a compensation for the rising costs of imported drugs, the government introduced cost-containment strategies. Overall, the reforms have mainly been introduced in pilot areas rather than on the national level. In the end, most of the initiatives stayed 'on paper' and were never fully implemented.

Lack of fundamental changes is the main reason for the absence of significant improvements in public satisfaction, health status, and financial protection. Some visible positive outcomes can be found in neonatal mortality and a small increase in life expectancy for both sexes. In addition, financial protection of its citizens remained satisfactory, with the lowest level of out-of-pocket payments within the CIS.

The inefficiencies of the Semashko system accumulated in both countries over the 25 years of independence. In terms of GDP per capita, Belarus is twice as rich as Ukraine. While it can afford an ineffective healthcare system, Ukraine cannot. The Belarusian example tells us, that without radical changes throughout all five control knobs, Ukraine will not be able to improve health outcomes.

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