

## Chapter IV. Health, Nutrition and Poverty\*



Belarus is a country with mixed evidence on health outcomes. On the one hand, the country shows some of the best health indicators in the region and an extensive coverage of health services that are mostly subsidized. Yet there are significant socioeconomic differences in health status indicators: the prevalence of stunting among the poor (17%) is twice that among the better off, and even worse in rural areas (22%). Belarus also faces the challenge of a morbidity profile marked by a double burden: increasing incidence of infectious diseases such as HIV/AIDS as well as an increasing burden of chronic diseases, trends which have serious implications for both public and household health expenditures. Lifestyle risks such as fat or alcohol consumption and smoking have health consequences for the poor and the rich. Alcohol and fat intake per capita is actually higher among wealthier groups than among the poor, but the poor are less able to manage the consequences given lack of access to information, less ability to afford high-cost care and so on. Moreover, reducing the overall caseload of chronic diseases would release fiscal resources that can be redirected to improving services which benefit the poor.

In a context of increasing fiscal pressures, provision of affordable health services for the poor requires policy actions to both increase efficiency and reduce the financial burden of disease. Policies to improve health status and care in rural areas is also required since urban-rural differences are one of the most significant challenges in Belarus. Given the increasing reliance by the health sector on out-of-pocket expenditures, care is also required to develop some form of health insurance for the poor and the vulnerable against catastrophic illnesses, in order to prevent associated costs from propelling these households deep into poverty.

### 4.1 Health and Nutrition Outcome Indicators

Some of Belarus' health indicators rank among the best in Europe and Central Asia (Table 16). The country has one of the lowest infant and under 5 mortality rates, lowest maternal mortality rates, almost universal immunization rates, and relatively low poverty incidence. Despite these achievements, Belarus also has one of the lowest male life expectancies in the region (only 62

**Table 16. Health Expenditures and Health Outcomes**

	GDP per capita, PPP (current international \$)	Health expenditure per capita (current US\$)1997	Birth crude rate	Death rate, crude (per 1,000 people)	Life expectancy at birth, female (years)	Life expectancy at birth, male (years)	Physicians (per 1,000 people)
Estonia	10,066	224	9.1	13	76	65	3.0
Russian Federation	8,377	133	8.8	15	72	59	4.2
<b>Belarus</b>	<b>7,544</b>	<b>83</b>	<b>9.4</b>	<b>14</b>	<b>74</b>	<b>62</b>	<b>4.4</b>
Lithuania	7,106	156	9.2	11	78	68	4.0
Turkey	6,974	128	20.5	6	72	67	1.2
Romania	6,423	63	10.4	11	74	66	1.8
Kazakhstan	5,871	62	14.6	10	71	60	3.5
Turkmenistan	3,956	22	20.9	7	70	63	..
Ukraine	3,816	54	8.7	15	74	63	3.0
Azerbaijan	2,936	9	15.2	6	75	68	3.6
Kyrgyz Republic	2,711	15	20.9	7	72	63	3.0
Georgia	2,664	16	8.7	9	77	69	4.4
Armenia	2,559	..	11.2	6	77	71	3.2
Moldova	2,109	36	10.1	11	72	64	3.5
Europe & Centr. Asia	6,794	123	12.2	11	74	64	3.1

Source: World Development Indicators 2002.

\* This chapter based on the findings reported in Murrugarra (2003).

years)—only better than Kazakhstan and Russia—and one of the widest gaps in life expectancy between males and females. In addition, growth of HIV/AIDS cases in Belarus is among the highest in the region (after Ukraine and Russia) and while the official notification rate of tuberculosis has decreased in the last years, cure rates and associated mortality rates have not. How can a country embody these two extreme dimensions in health care? The answers are partially linked to lifestyle conditions (particularly smoking and alcohol drinking) that represent risk factors explaining one of the highest rates of cardiovascular diseases and other chronic illnesses.

**Children in rural areas appear to face Stunting is a significant problem in rural areas Belarus.** Stunting (low height for age) is generally regarded as an outcome of long-term

**Table 17: Stunting Rates in the ECA Region (% of children with HAZ<-2)**

Country	Year	Stunting
Albania <sup>b</sup>	1997	22.7
Armenia <sup>a</sup>	2000	12.0
Azerbaijan <sup>b</sup>	1996	22.2
<b>Belarus<sup>b</sup></b>	<b>2001</b>	<b>13.4</b>
Kazakhstan rural <sup>a</sup>	1995	21.8
Kazakhstan urban <sup>a</sup>	1995	15.8
Kyrgyz Republic <sup>a</sup>	1997	24.8
Russia <sup>b</sup>	2000	10.6
Tajikistan <sup>c</sup>	1998	55.0
Uzbekistan <sup>a</sup>	1996	31.3

<sup>a</sup> Rates are for children 0 to 35 months

<sup>b</sup> Rates are for children 0 to 59 months

<sup>c</sup> Rates are for children 6 to 59 months

Source: Galloway, Rokx, and Brown (2000); DHS; RLMS.

suggests that about 30% is due to conditions in the perinatal period, indicating that lack of appropriate or good quality practice may be a problem in perinatal care. The decline in the IMR since 1996 reflects the improvements in service provision such as the introduction of multi-level perinatal care. Despite these improvements in reducing IMR during the last decade, however, less progress has been observed in rural areas and poorer regions. While urban IMR rapidly declined, child mortality in rural areas, where poverty is higher, has been less responsive. Similarly, most of the improvements in IMR are observed in Minsk City and Grodno oblast while Gomel, Brest and Vitebsk have the highest IMR by 2001 (these regions also have the highest poverty risk).

deprivation and poverty. Anthropometric evidence collected in the household survey shows that about 13% of children under 5 are stunted in Belarus, less than several other transition countries (Table 17), but slightly higher than Russia (10.6%).<sup>14</sup> Disparities in the stunting rate exist between different parts of Belarus: more than 21% of children under 5 in rural areas are stunted, compared to less than 10% in urban areas. If stunting is reflecting past investment on children's nutrition, the evidence suggests that nutritional inequalities may be present and need attention.

**Infant and children mortality declines in rural areas have been less responsive than in urban areas.**

Infant mortality rates (IMR) are around 9 per live births in Belarus, decreasing significantly from more than 13 in the mid-nineties (Figure 13) but still far from the MDG target of 5.3.<sup>15</sup>

The composition of IMR by cause of death

<sup>14</sup> The anthropometric evidence collected in the household survey covered a sample of 665 children under age five, about 200 in rural areas. This small sample provides suggestive evidence that needs to be complemented with in-depth studies on nutrition in Belarus.

<sup>15</sup> Based on the Ministry of Health data, IMR fell to 8 per live births in 2003-2004.

Figure 13

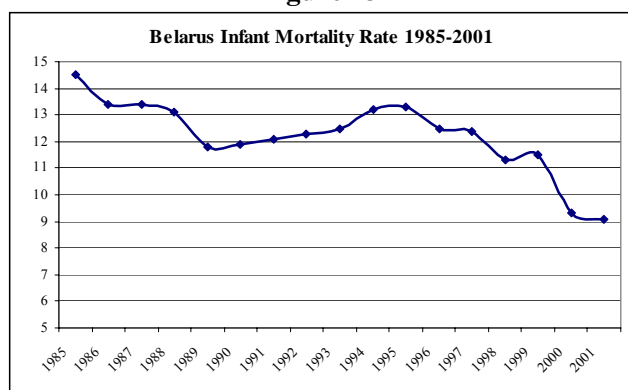
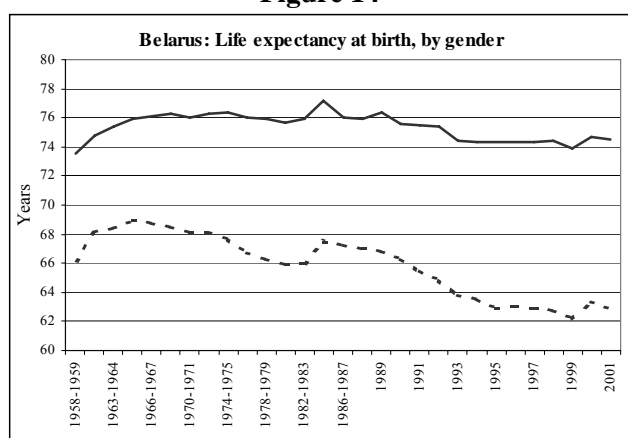


Figure 14



**Life expectancy in Belarus is among the lowest in the region, mainly due to the high rate of adult male mortality.** Life expectancy in Belarus (Figure 14) reached a peak in the mid-eighties with more than 72 years, coinciding with the anti-alcohol campaign in the former Soviet Union. After that, it has experienced a marked decline, especially after independence and during the early years of transition (1992-93).

Another feature is the widening gap between life expectancy among males and females, from 10 years in 1991 to almost 12 in 2001. During the last decade, females' life expectancy remained relatively constant between 74 and 75 years. During the same period life expectancy for males decreased from almost 67 before independence to 62.8 in 2001.

The major factors driving the decrease in life expectancy are the increased importance of cardiovascular diseases

(CVD) with death rates increasing more than 20% between 1995 and 2001, especially in rural areas. In addition, death rates from injuries and poisoning (some related to excessive alcohol consumption) have also increased by 38% in rural areas. In urban areas, on the other hand, death rates from digestive organs increased by 29%. The evidence then points to a major sources of reduced life expectancy: chronic illnesses related to lifestyle conditions.

**Belarus evidences the double burden of increasing chronic diseases and the spread of some deadly infectious ones.** Illnesses of the circulatory system are the *fastest growing morbidity* in Belarus (33% between 1995 and 2001), although they still represent a small fraction of the first diagnoses. Despite the small fraction of reported cases, mortality from ischemic heart disease in Belarus is the highest in the WHO's European Region. In other transition countries, an increased pattern of infectious and contagious diseases is also emerging, reflecting the decayed health systems due to fiscal constraints. In Belarus, besides two exceptional and important problems—TB and AIDS—infectious diseases are not growing as fast as in other CIS countries due to the relatively better maintenance of the health network.

**The poorest households report being in ill health more than the richest households.** Measuring morbidity in household surveys is a difficult task. Household surveys typically contain self-reported measures of morbidity that are, however, affected by individuals' characteristics such as education and income, that affect their ability and sensitivity to prevent, detect, identify and report illness. For example, the fraction of non users of condoms for those having regular sex is the highest among the poor, and attitude towards HIV-infected individuals

among them is the most conservative. Most importantly, prices of and access to health care services also affect self-reported morbidity.

Self reported morbidity and disability, however, are the only indicators available in the survey which can be linked to the household's poverty status.

As part of the Belarus HIES, individuals assessed their health status as “Good”, “Bad” or “Not good nor bad” (or Normal). About 24% reported themselves in good health, 57% in normal, and 19% in bad health. For all Belarus, the poorest quintile (below the poverty line) evidences the highest proportion of individuals reporting *bad health* (24%) while among the top quintile it is only 16%. This pattern is only observed in urban areas, since the proportion of people reporting bad health in rural areas is relatively uniform across poorer/richer groups. In terms of gender differences, 23% of females reported having bad health compared to only 15% among males.

Bad health increases with age (as expected) particularly after age 50. The fraction of elderly in bad health is higher among the poor, in both urban and rural areas. Moreover, inequality in morbidity is higher in urban areas where prevalence of bad health in the poorest quintile is more than twice that of the richest quintile. This urban pattern is of particular concern given the observed association of TB and HIV/AIDS incidence with poor living conditions in overcrowded, poorly ventilated homes, with immune systems made weak by lifestyle factors.<sup>16</sup> In summary, morbidity patterns suggest that the poor have worse health status, better observed in urban areas, despite the limitations of self-reported indicators.

#### 4.2 Lifestyle Risk Factors: A Key Poverty Issue

The health status of the Belarusian population discussed above is associated not only with the coverage and quality of health services, but also lifestyle risk factors. Tobacco, fat consumption and excessive alcohol cause a great deal of health damage. Even when the rich and the poor consume equal amounts per capita (or the rich consume more, as we discuss in the case of alcohol and fat in Belarus), these factors have even worse effects among poorer people due to lack of preventative health activities (including safe sex and drug prevention activities), additional economic stress, and somehow less ability to manage the corresponding chronic illnesses (imagine for example a poor rural elderly man and an urban one managing diabetes or cardiovascular problems). Moreover, health policies to reduce poverty need to be broad in addressing lifestyle issues *across the population* since doing so will reduce the financial burden of some chronic diseases and generate fiscal savings which can be redirected as needed. For these reasons, we briefly review three types of lifestyle risks which have been found to be important in Belarus: 1) fat intake, 2) alcohol consumption, and 3) smoking.

**The Belarus diet is highly dependent on fats.** About 37% of the per capita calorie intake is coming from fats, higher than the recommended 30% from fat sources. Belarus households not only evidence a diet rich in fat, but the fat mainly (64%) comes from animal sources. Fat intake is not entirely associated with poverty or prices, but reflect a cultural symbol in Belarus. The common practice of eating *sala* (*Canio*, or pig fat) in different versions is relatively expensive. The price of *sala* is higher than the price of lean meat. High fat intake is widespread and affects all socioeconomic groups but is particularly large in urban areas. In Minsk City fat-origin calories represent more than 41% compared to 34% in rural areas.

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<sup>16</sup> While this is an important issue in Belarus, additional information on the patients and their communities is required for a comprehensive understanding of the poverty linkages.

Individuals in better-off households (such as the richest quintile) have a higher fat intake than poorer households, but poorer individuals also have intake above the recommended levels. Among males, obesity prevalence for the poorest quintile is less than half that of the richest quintile. For females, the relative gap is smaller but prevalence is still important among the poorest. The high fat diet represents a major problem for Belarus in terms of triggering a high burden of chronic heart disease. For the poorer household, treatment of the disease is likely to be a higher financial burden than for the richer household in terms of affordability.

**Reduced alcohol consumption can reduce poverty levels.** Alcohol is an important piece for the Belarus health puzzle since it is an important risk factor for many diseases and for adult male mortality. There are also several links between alcohol consumption and poverty. *First*, alcohol intake may increase health risks and these could differ across socioeconomic groups. *Second*, alcohol consumption may reduce expenditures and consumption on other goods and services and push households below the poverty line (that includes only necessary goods). This direct effect of alcohol expenditures is examined below. *Third*, alcohol abuse may also reduce productivity and affect households' income and consumption.

Compared to other countries in the region, Belarus ranks among the highest in alcohol consumption. With almost 13 liters of pure alcohol per capita among those older than 15 years, Belarus is above Estonia (10.5), Lithuania (11.6) or the Russian Federation (10.8), but below other countries like Moldova (17.4) and Portugal (18.8). A distinctive element in NIS countries is the composition of total alcohol consumption, where spirits (as opposed to wine and beer) are a major source. Belarus is an extreme case among NIS countries with heavy reliance on spirits, like vodka, where it ranks second only after Moldova. Consumption of pure alcohol via spirits is 7 to 25 times consumption of pure alcohol in beer and wines, respectively, much higher than other NIS and CEE countries.

**Table 19. Belarus: Number of drinks per adult per year,**  
(number of 0.0168 liter pure alcohol doses)

	Poorest	II	III	IV	Richest	Total
<b>Urban</b>	<b>17.0</b>	<b>27.9</b>	<b>39.6</b>	<b>55.7</b>	<b>88.5</b>	<b>49.7</b>
-% vodka	48.8	58.7	63.7	65.0	62.5	61.1
<b>Rural</b>	<b>32.2</b>	<b>49.0</b>	<b>67.3</b>	<b>89.3</b>	<b>132.0</b>	<b>67.7</b>
-% vodka	45.6	54.4	63.3	67.3	70.0	60.1
<b>Total</b>	<b>23.4</b>	<b>36.0</b>	<b>49.5</b>	<b>65.3</b>	<b>98.0</b>	<b>55.6</b>
-% vodka	47.3	56.8	63.6	65.7	64.3	60.8

**Box 14: Do Households Respond to Alcohol Prices?**

The price of vodka per liter (BYR 4,300) is five times that of beer (BYR 850) and almost 3 times that of wine (BYR 1,520). If prices are standardized by actual alcohol content (BYR per ethanol-equivalent) instead, vodka is the cheapest drink per volume of pure alcohol. The relative cheapness of vodka may explain part of the high consumption in Belarus, and as such, tax instruments (e.g. higher sales tax, VAT) could be explored as a means to deter alcohol consumption.

Alcohol consumption is higher in rural areas (68 drinks), where centralized heating is less accessible and poverty is higher (Table 19). Significant differences across socioeconomic groups are also observed: the better-off adults drink 4-5 times more than the adults in the poorest quintile. Most alcohol consumed in Belarus is hard liquor (hereafter vodka, for simplicity), with more than 60% of total pure alcohol across quintiles. Only the poorest households have a slightly smaller share of vodka (between 45 and 49%).

Given the strong preference for alcohol consumption compared to other countries, allocation of household resources on alcohol were be examined. Average household expenditures on alcohol are around BYR 5,200, and represent about 3% of household total consumption. While better off households spend a larger share in alcohol (more than 4%) even the households in the poorest quintiles spend more than 2%, particularly in rural areas where they spent almost 3% of their consumption value. If household resources were able to be switched from alcohol to other consumption goods and services, a positive impact on welfare measures could be expected (assuming that preference for alcohol is due to dependence and does not improve the individuals well-being). Despite the higher consumption among the rich, the shift in expenditures by poorer households would also reduce poverty incidence by more than 8% (1.7 percentage points).

**Tobacco and smoking has less impact on poverty, but is still at a high level among the youth.** About 26% of the population aged 17 or more do smoke, but this is mainly a male phenomenon: 52% compared to 6.4% among females. While smoking incidence among the youth (aged 15-25) is slightly lower (40%), more than two thirds of them smoke everyday (World Bank, 2002c). A large fraction of male smokers (about 40% of them) are heavy smokers, as defined by 20 or more cigarettes per day.

Smoking is similarly spread in urban and rural areas, but is higher among the poor than for better off groups. About 62% of males in the poorest quintile smoke compared to only 43.6% in the richest quintile. Among females, however, a reverse pattern is observed. About 8% of urban women smoke compared to less than 3% in rural areas, and it is the better off in urban areas who smoke more.

Expenditures on cigarettes are low in Belarus. On average, households spend BYR 2,436 per month representing slightly more than 1% of the value of total consumption. The better-off households spend more than the poor ones (3,350 compared to 1,640), but tobacco expenditures among the poor represent a 30% larger share of consumption (1.3% for the poor versus 1.1% among the rich). Similar to the exercise on alcohol consumption, shifting household resources from cigarettes to welfare-improving consumption (of other goods and services) would reduce poverty incidence by 5.4% or more than 1.1 percentage points. This has a lower impact on poverty than that of alcohol because of the lower monetary value of expenditures on tobacco.

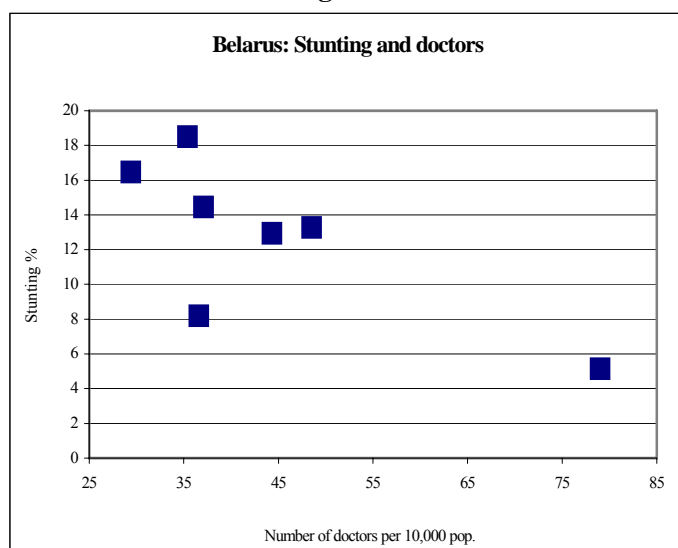
#### **4.3 Improving the Efficiency and Equity of the Health Care System**

**Health resources: mismatch in distribution of resources and need.** Belarus is characterized by a publicly provided health care system with a generous benefit system and an oversupply of resources. To some extent the Belarus system is still characterized by the main features of the Semashko model, although important changes and reforms have been implemented in recent years.

- *The Semashko model.* The former Soviet model was composed of several key elements: management was highly centralized; health care was funded through general taxation, with basically no cost-sharing arrangements with patients; the budget for providers was not based on performance, but on strict input norms; all health care workers were public employees receiving a salary for their services; the provider network was publicly owned and composed of multiple layers of services; the model of care was hospital-based; no general practitioners, as all doctors were specialists; nurses, midwives and *feldshers* (staff with basic health training) had very limited skills and were in general underutilized.

- *Oversupply of staff.* The coverage of health services is widespread, and Belarus has one of the highest numbers of doctors per population in Europe and Central Asia Region. While official statistics indicate about 45 doctors per 10,000, about 27-28 doctors are directly involved in treatments while the rest are in sanatoriums, managers or trainers. This is an indication of the mismatch in skill mix that requires a large fraction of doctors to perform other non medical activities.
- *Geographic disparities.* Despite the large number of doctors, there are a number of ambulatories that have no doctors, suggesting geographic disparities in resource allocation. Allocation of doctors and medical personnel across regions is not uniform, ranging from 29 in Minsk-Oblast (Gomel with 35 doctors per 10,000 population is the next) to 79 in Minsk City. While these differences may be exaggerated because of patients' mobility (such as rural patients visiting hospitals in raion centers), they suggest problems in the system that respond to rigidities in the allocation rules.

Figure 15



such as living in an area subject to cold weather. Similarly, each of these populations may also exhibit a different ability to finance health care services. Thus, when comparing the number of doctors and the level of stunting among children under 5 (Figure 15), regions with higher levels of stunting—and presumably higher levels of health need—such as Gomel (18%), have the fewest number of doctors.

- *Inpatient stays.* This is an important dimension of health care, which signals the presence of inefficient treatment protocols and the use of hospitals as a safety net. Length of inpatient stay in Belarus is about 15 days compared to 16 for Russia, 12 in Latvia, about 10 in Poland and Estonia, and between 5 and 8 days for the European Union. While this may reflect the presence of social patients (see below), it clearly underscores efficiency problems in the use of health resources.<sup>17</sup>

<sup>17</sup> Evidence for 2003 suggests that the length of stay in hospital is declining to 12.2 days.

**Health care utilization: hospitals are used more by the poor than the rich, while ambulatory facilities are used more by the rich.** This unexpected pattern of utilization is evident particularly in rural areas, reflecting accessibility issues with respect to primary care and the use of hospitals as a “safety net” rather than as a source for tertiary, specialized care..

- *Ambulatory care.* The fraction of individuals seeking ambulatory care is 47%, with higher utilization in urban areas. In rural areas, the utilization rate for the richest quintile is 31% higher than for those in the poorest quintile. In rural areas, despite free health care services, utilization may be affected by physical access to providers where better off households can afford the time and financial cost of transportation. On the other hand, the lack of significant differences in utilization in urban areas may reflect the relatively easy access (and probably better quality) in a system of publicly provided health care.
- *Hospitalization.* About 20% of individuals reported staying at hospitals during the last 12 months, but a higher utilization is found in rural areas (22%) than in urban (18%), in contrast to the pattern in ambulatory care. Also contrasting the findings on ambulatory care, people from the poorer quintiles are more likely to stay in hospitals (22%), although in rural areas a very equal pattern of utilization is found. Examining utilization for those in poor-health status only, we find that 40% stayed at the hospital, with slightly more in rural areas (41%). In addition, in rural areas the poor in bad health are more likely to be hospitalized than the better off. In urban areas there is no significant difference across quintiles.
- Why is the hospitalization rate higher for the poor? One explanation is the phenomenon of *social patients*: individuals that seek hospitalization as a means to cope with harsh weather periods. This is a pattern commonly found among the elderly in rural areas, particularly among those without support during the winter.<sup>18</sup> To examine this phenomenon further, hospital utilization rates for the elderly were analyzed. The elderly have higher hospitalization rates (27%) than the average (19%), as can be expected. Most importantly, in rural areas, the elderly-to-average odds of being hospitalized increase with poverty, while the reverse occurs in urban areas. The social patients hypothesis may explain the pattern in rural areas assuming there is no need for drugs (as in fact, illnesses are not severe). In urban areas, however, social patients (if any) may be offset by the financial availability of the better off to pay for drugs if needed. In summary, hospital utilization reflects a good coverage of the health system, with relatively low inequality in utilization.

**Public expenditures on health focus on curative, hospital-based care.** Similar to the education sector, the state dominates the financing for health services as well. The bulk of health care financing is on hospital care, but given the utilization patterns discussed above, the benefits of hospital financing are actually distributed in a pro-poor way.

Total expenditures in health account for 5% of GDP, while this is below the government’s target of 7.5%, it is much more than that spent in other transition countries. In fact, Belarus spends

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<sup>18</sup> A marked seasonality has been observed in health care utilization, especially for in-patient care in rural areas that may not be entirely attributed to real morbidities. Rural areas have a growing share of the elderly although during harvest season their younger members (usually living in urban areas) stay with them. After harvest time, and particularly during the January-February months, pensioners go to hospitals reporting any symptoms and are admitted for several weeks, even if the morbidity does not require it. This anecdotal evidence indicates that hospitals have a safety net role in rural areas, which in fact underscores the need to better design efficient safety net mechanisms.

about US\$ 83 per capita and ranks among the highest in the ECA region, below Russia (\$133), Lithuania (\$156), Estonia (\$224) but much more than Ukraine (\$54) or Moldova (\$36).

As discussed the Belarus health system still emphasizes the curative side of health care, hence, concentrates most of the expenditures on hospital care. Between 2000 and 2002 little change was observed in the composition of public expenditures across providers. About two-thirds are allocated to hospitals (mainly in urban areas), about 14% to Polyclinics and ambulatory services, 7% to FAPs and other local health centers, 3% in epidemic and public health activities, and the rest (about 10%) on administrative and investment activities.<sup>19</sup>

**Public expenditures on health benefit the poor relatively more.** Belarus has a distinctive pattern of health expenditures compared to other transition countries in the region (Table 20). *First*, overall health expenditures are progressive, in the sense that the poor benefit relatively more than the better off. Individuals in the poorest quintile capture almost 23% of government expenditures, compared to only 18% for those in the top quintile. The concentration index takes a value of -.05 corroborating a pro-poor pattern in expenditures. A *second* important aspect is that between primary and hospital care, it is hospital care that is the more progressive intervention (concentration index -.06). This reflects several factors: the curative nature of the system where primary care is less utilized (and in fact less effective), the free delivery of services (except drugs), and the role of social patients among the poor.<sup>20</sup>

#### Box 15: Main Elements of Belarus' Health Reform Program

Belarus' health care resources are distributed in a way which provides relatively good access to health care services across all socioeconomic groups and spending per capita across region is relatively homogeneous. Resources are not being used efficiently: hospital utilization rates also indicate that poorer people may tend to turn to inpatient care as a safety net rather than as a health resource. At the same time there continues to be mismatches across regions in terms of resource availability, the actual health care needs of the population and the financial capacity of households.

Recent reforms that were initiated aiming to improve the system, mainly addressing financing, effectiveness and delegation. This major initiative was piloted in Vitebsk and extended to other regions in 2002. In order to enhance efficiency the Vitebsk reform encompassed three major activities. *First*, financing was based on *capitation*: per case in hospitals and per population in rural areas. *Second*, the pilot started training General Practitioners to enhance Primary Health Care services. *Third*, providers were delegated funding and managerial decisions. Preliminary results from the pilot suggest that there is a stabilization of indicators, that is, there is no increase in morbidities. However, a comprehensive evaluation of the impact needs to be conducted.

<sup>19</sup> The share of hospital expenditures may include the budget of polyclinics attached to them and hence, share of hospital care may be smaller than described here.

<sup>20</sup> Given that the Belarus system is publicly funded, to assess the impact of expenditures on the population, a expenditure tracking survey (PETS) could provide detailed and useful information to be used in efficiency-enhancing alternatives.

**Table 20: Incidence of Public Expenditures on Health, by Provider, 2002**

	% of total expenditures captured by quintile					Total Budget	Concentration Index
	Poorest	II	III	IV	Richest		
Hospital	23.6	20.7	19.3	19.2	17.2	528.9	-0.058
Polyclinic	19.6	21.1	20.5	19.4	19.3	173.0	-0.009
Total	22.7	20.8	19.6	19.2	17.7	701.9	-0.046

Source: HIES 2002

#### 4.4 Private (Household) “Out-of-Pocket-Payments”

According to the Constitution, health care is free of charge, but even in this system of freely delivered health care services, patients still have to pay for some items. The limited budgets of health providers and recent changes in the regulations have enabled hospitals to charge for specific items such as hotel services (rooms with TV, food, etc) and for diagnostics and treatments that are approved by the specialist. In addition, drugs are not provided freely, except for specific vulnerable groups of the population. The Resolution 963 and additional amendments authorized social services (such as health) to provide fee-based commercial services for non-prescribed services or treatments (i.e. at the patients’ discretion). It is evident that these fees, which may be necessary from fiscal and efficiency points of view, may impose significant burdens on poorer people.

**Health out-of-pocket payments (OOP) are small in absolute terms.** In this system, and despite the high utilization rates, household health expenditures are relatively small. On average a household spends BYR 4,680 on health care and it represents 2.5% of their consumption value. For households this is small, even compared to items like alcohol and tobacco. The average Belarus household spends more on alcohol (BYR 5,200) than on health care, particularly in rural areas. Interestingly, OOP for health care represents a similar share of consumption across urban and rural areas and socioeconomic groups. Yet, qualitative evidence suggests that part of the reason for low absolute expenditures on health—especially for the poorer households—may reflect foregone use of health services rather than the low cost of services per se (Box 16).

#### Box 16: Burden of Health Costs Can Be High

Being poor means that for a couple of years my own income is not enough to make both ends meet. My former husband helps (he pays alimony). My parents also help because our “free” medicine has taken up all my savings. Last year I had a surgery. Up till now I still need to take medicines. I spent a lot of money on initial tests. And it was done in a public hospital! It happened on August 2002 just after the government had adopted the resolution on introducing fee-based services in public health facilities. You have to pay for practically all tests, for many procedures; besides I had to buy syringes, surgical threads and pharmaceuticals for post-surgery rehabilitation. I have recently spent two weeks in hospital. My parents gave me 200 000 BYR for medicines. My salary ranges from 90 000 BYR to 160 000 BYR while a three-months course of therapy costs 189 000 BYR. I need to eat something as well. (Minsk Oblast)

Of course, I would like to undergo some treatment, but today you have to pay for everything but I do not have money. Therefore, I do not go for health care and try to survive without doctor’s help. (Gomel)

I do not go for health care. If the worst came to the worst I would try to get medical services via my acquaintances as I used to work as a driver of an ambulance car.

In hospital, even if you are dying, a nurse will not come to you unless you give her a chocolate bar or any other gift.

Source: Interviews June 2003

**Are health expenditures catastrophic in Belarus?** We examined the effects of OOP on poverty by comparing poverty estimates if health expenditures were not needed and the savings were instead used in welfare-increasing goods. Table 21 presents poverty estimates for the pre-payment case (where OOP are used on other consumption items) and post-payment case (where consumption decreases because of expenditures on health). Poverty incidence (headcount) would be reduced by almost 9% (1.6 percentage points) and extreme poverty by less than 7%. No significant effect is found on other poverty measures. These numbers are not small, and in fact are very similar to the impact of avoiding alcohol consumption.

Poverty measure	Pre-payment	Post-payment	Effect on poverty	Relative change
Headcount	19.0%	20.6%	1.6%	8.6%
Poverty gap	4.0%	4.3%	0.3%	7.6%
Severity of poverty	1.3%	1.4%	0.1%	7.3%

#### 4.5 Policy Recommendations

The socio-economic disparities in health status and health care utilization indicate the need for reform to the way health care is delivered and resources are allocated. The government of Belarus has already adopted measures to increase efficiency of the system and enhance its effectiveness. There is need to evaluate the initial impact of the reforms with particular attention to whether the reforms have had any unintended consequences in terms of worsening poverty or inequality, or whether they have gone far enough. Addressing these concerns could be integrated into the roll-out of the reform program itself and need not prevent the government from continuing a carefully managed program to improve the effectiveness of the system.

- *Lifestyle patterns.* The levels of alcohol and fat intake among the poor, while lower than for the rich, still represent an important lifestyle risk factor since they exceed internationally recommended levels and can constitute a significant financial burden for the poor. Evidence from several countries suggest that preventive activities that improve lifestyle patterns can both reduce specific morbidities and their associated health care costs. Besides information and education campaigns, instruments that affect the incentives for certain lifestyle patterns can be adopted. Price and tax policies regarding alcohol and tobacco would support the education effort and make it sustainable over time (in contrast to the effective but short lived campaign of the 1980s). Detailed analyses of households' responses to prices are needed for better designed policies.
- *Revising resource allocation rules.* Despite good health coverage, geographic inequalities are observed. Allocation of budgets and medical resources across regions is very uniform but the small variation remaining suggests that regions with more need (higher stunting rates) or with less ability to pay (higher poverty incidence) *do not* have higher levels of medical personnel. Regulations that affect allocation of staff and resources across regions must take into account both need and ability to pay in order to protect the health of the most vulnerable.
- A missing dimension in this analysis is regarding *quality of services.* Health systems in countries facing severe fiscal strain, like Russia in 1998, saw the quality of services significantly reduced by the limited funding for medicines, materials or utilities. A study is called for which focuses on the current quality of health care services and its determinants.

- *Targeted health assistance for the poor.* Household expenditures on health care are relatively low. These low expenditures, however, have important effects on poverty. Out of pocket payments for health care, when shifting resources from consumption, increase the poverty rate by almost 9%. In a system that may be increasingly relying on households' contributions, mechanisms to financially protect the poor from catastrophic health expenditures need to be in place. One option would be for government to commission a study exploring the feasibility of alternative mechanisms which provide protection to the poor in the face of potentially catastrophic health costs.