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ON THE INEQUITABLE IMPACT OF UNIVERSAL HEALTH INSURANCE: THE EXPERIENCE OF BULGARIA IN TRANSITION

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ABSTRACT: This article deals with the social democratic aspiration of equitable access to health care in Bulgaria, a country in transition since 1989 from communism and a command economy to democracy and a free market. The focus is on access to health services and resources after the introduction of a universal health insurance system, with particular reference to formal and informal out-of-pocket payments for health care. The paper reports empirical results from a national household expenditure survey, supplemented with a semi-structured interview, conducted at the end of the survey period (April-May 2002). The results bring to light the groups in society who suffer most in this scenario: the poor, Roma, older persons and those living in towns and villages. The study reveals that the stated aim of the National Health Insurance Fund, to provide equitable access to health care, is a mirage rather than a reality, as the vast bulk of health care is self funded. This paper has particular significance for understanding the challenges faced by post-communist states in their attempts to achieve social democratic health care reforms.

KEY WORDS: sociology, universal health insurance, patient payments, equity, access to health care, Bulgaria

Introduction

The transition from a centralized command to a market-oriented economy in Bulgaria includes as an inseparable part the transformation of the health system from governmental budgetary control to mixed public and private funding. However for this transformation, neither the state nor the society found themselves well prepared (Borissov and Rothwell 1996; Pavlova et al 2000, 2002: Balabanova and McKee 2004). Although political changes began shortly after the fall of the Berlin Wall, in 1989, for all practical purposes a significant transformation of the health system did not begin until 1999 (except for a few preliminary steps regarding regulation and policy discussion of a developmental nature): almost 10 years after the start of the political changes.

The real structural transition began with a reform of the health system laws, the passing of the universal health insurance legislation in 1998. and establishment of the National Health Insurance Fund (NHIF) in 1999 (Short and Hadjiev 2002; Short and Hadjiev 2004). This set of reforms set Bulgaria on the path towards realization of the 'Right to Health'; consistent:

with the 1948 United Nations Declaration of Human Rights (Palmer and Short 2000:257). In Australia, Canada and other states with similar universal health insurance systems, the social democratic ideal of equitable access to health services is enshrined in legislation that aims tc achieve equal access to health care on the basis of clinical need, rather than the ability to pay.

IN Bulgaria, outpatient and inpatient medical establishments were transformed from health institutions with state or municipal ownership into limited liability proprietary companies or share companies through an Act of the National Assembly in 1999. The national system of contracts (National Framework Agreement) for outpatient care, contracts negotiated between the NHIF and providers of medical services, was introduced in 2000 and 'he partial funding of inpatient care, through the financing of clinical paths for hospitals under contract with NHIF, commenced in 2001 (Koulaksazov et al 2003). This health care transition was supported financially and technically by the World Bank, and partially modelled on the Australian Medicare system of universal publicly funded health care insurance (Hutton 2002; Palmer and Short 2000; De Voe and Short 2003). The key events in the lead up to this most significant reform process are summarized in Table 1.

Table 1: *Key events in the lead up to substantive reform of the Bulgarian health care system, 1989 – 1998*

1989 *Beginning of democratic transition.*
1990 *Re-establishment of Bulgarian Medical Association and Bulgarian Doctors' Union.*
1991 *New Constitution of the Republic of Bulgaria:* adopted.
1991 *Local Self-Government and Local Administration Law*. This law introduced the principle of decentralization in economic and administrative spheres. The municipalities (n=262) were given i the right to manage their own revenues and became responsible for education, health and social care of the populations within their respective municipalities, including the development of physical infrastructure, such as hospitals.
1991 *Regulation of medical private practice.* Private practice permitted (forbidden since 1972). This regulation set the terms and conditions for the registration of private practice and determined i the method of calculating fees for medical services.
1994 *Government decree on contracting out for general services.*
1995 *National Health Strategy*. The first national health strategy was developed with the support of WHO. This document analyzed the health status of the population and specified health system problems. No plans for health system reform were included.
1995 *Draft Law on Health Insurance:* withdrawn.
1995 *Law on Pharmaceuticals and Pharmacies in Human Medicine:* created the basis for restructuring the pharmaceutical sector. Ten EU Directives on Good Manufacturing Practices (GMP) were adopted with a package of 32 pieces of secondary legislation. This determined the methods and means for the production, testing, registration, sales, import, prescribing, dispensing, advertising and storing of pharmaceuticals.
1997 *Amendments to People's Health Act*. Approved in 1973 and endorsed from 1 January 1974, this is the main health law in the country. More than 30 amendments were introduced. The amendments of introduced paid medical services, under conditions of free choice of provider by patients.
1997 *Directive 22 on Conditions and organisation of the payment for medical care in case of patient choice (in Bulgarian).* This legislative document established fees for health services that must be paid out-of-pocket under conditions of free choice by the patient of physician or hospital services within public sector provision, as well as luxury services such as a private

room with en suite bathroom. Introduced uniform fees for medical services paid by patients in public facilities, but not private practices.

1998 *Law on professional organisations of doctors and dentists.* Regulates role of professional organizations as partners of the NHIF in contracting health care services; jointly responsible for the provision of high quality standards and ethical requirements in health services provision.

Sources include Koulaksazov (2003)

THE slowness in undertaking the reforms and in finding solutions brought the incumbent health system into a state of deep crisis and financial collapse. The main contributing factors for such an outcome came from the continued utilisation of a principle, established and applied for a number of decades, of residual funding of the health system, the relatively low percentage of the GDP set aside for the health system (3.5-4.4% of GDP), the worsening image of the system, the low level of pay for all categories of medical personnel (National Statistical Yearbooks, 1980-2000) and the aged material base of the health system (outdated and poor-quality equipment and facilities) (Borissov and Rothwell 1996). As a result, Bulgaria deteriorated to one of the lowest places in the rankings amongst the countries in transition in such aspects as life expectancy (World Health Organisation, European Health for All Database), the high general, premature and child mortality, and a continually deteriorating self assessment of the population of their health status (National Statistical Institute 2003). Despite a tendency for some improvement of these indices in the 21st century, their level is still unacceptably high (see Table 2).

THE transformation of the health system was made more difficult by a constantly rising level of impoverishment of the population. According to World Bank data, in 2002, 8% of the Bulgarian population earned US$2.15 a day, whilst 32% earned US$4.30 a day (UNDP 2003). The dynamics of poverty and the qualitative aspects of impoverishment show a growth in marginalisation and the formation of a stable group of chronically poor households.

DURING the years of the transition, corruption in the health system began to flourish and the grey economy became embedded in the health system. Under-the-table (informal) payments or gratuities were virtually legalised by the new practice of registration of charities and associations to which patients were strongly advised to make voluntary donations. The individual amount of these 'donations' was determined by the so called 'eye method' whereby the medical personnel looked at the patient and subjectively evaluated his or her ability to make one or another amount of donation. This approach is not totally unknown in world practice (Balabanova and McKee 2002). At the same time, the low pay of those working in health care (Ivanova 2007) raised their internal motivation to accept unregulated payments. Such behaviour is not atypical of those working within publicly funded health sectors in other countries as well (VanLerberghe *et al* 2002). As there was no transparency and accountability in the process, as a countermeasure in 1997, the Ministry of Health adopted Ordinance 22 for the Conditions and Processes for Payment for Health Services. (see Table 1). This regulation was supposed to have a temporary application but this did not happen. It did not prohibit or have the effect of eliminating the practice of donations but, rather, added to it by officially allowing health care establishments to charge for some services that are not covered by the state or not sufficiently covered. Later amendments set the limits for the core health service charges. This, in practice, saw the beginning of official payments for health care and can be considered as the end to the former state socialist system of so-called 'free' health care.

Table 2: *The coefficient of general, child and premature mortality, 1990-2003*

Year	General mortality (%)	Child mortality (%)	Premature mortality as % of general
1990	12.5	14.8	29.7
2001	14.2	14.4	25.2
2002	14.3	13.3	29.7
2003	14.3	12.3	24.3

Source: National Statistical Institute (1990-2003).

THE health insurance system is financed by compulsory health insurance payments and functions on a social principle. It ensures access to a basic package of health services for every insured citizen. The National Health Insurance Fund started paying for a package of minimal services for outpatient health care in 2000, and for inpatient health care from 2001. The universal health insurance model adopted in the Republic of Bulgaria, administered by the National Health Insurance Fund, does not provide for non-participation. Access to health care is regulated by the state and does not depend on the financial or property status of the person. Being compulsory, one has to pay whether one can afford it or not. Each year the package of social security laws determines the level of employee and employer contributions to the NHIF The employee pays 1.5% and the employer 4.5%. For almost half the population, including children up to the age of 18, pensioners, civil servants, the military and others, the state covers the whole, so the citizen does not contribute directly. If one does not pay one's insurance then one is denied access to outpatient and/or inpatient health services, except in an emergency.

THE country report for Bulgaria from the European Observatory on Health Care Systems found:

> *... the introduction of official co-payments for health care services, together with the continuing (reportedly unabated) practice of under-the-table payments, work against achieving equity. It is likely that there have been serious negative impacts on access to services and pharmaceuticals due to lack of affordability. This issue requires particular attention, especially for vulnerable groups; moreover, some of these groups are more likely to remain uninsured by the National Health Insurance Fund and therefore excluded from coverage (Koulaksazov* et al *2003:90).*

FORMAL AND INFORMAL OUT-OF-POCKET PAYMENTS

VERY important for equity in access to health care are the questions linked to the level of out-of-pocket payments as a share of household budget. In the transition period in Central and Eastern Europe, one of the most sensitive social questions, linked to the problem of out-of-pocket payments, is the question of unregulated (informal) payments in the health care system. This question is particularly acute for transition countries such as Bulgaria and Hungary (Balabanova and McKee 2002; Gaal and McKee 2005). Research is however seriously hindered because of the nature of informal payments and difficulties in registering them; information is incomplete and imprecise (WHO 1997). Out-of-pocket payments or gratuities have been calculated to be 10% of expenditures in the Czech Republic, 20% in

Hungary and 25% in Romania (Gaal and McKee 2005; WHO 2000). In Georgia, in the former Union of Soviet Socialist Republics, out-of-pocket payments (formal and informal) are the major source of health care financing, equal to approximately 70-80% of total health expenditure (Belli *et al* 2004). It is well to remember that informal payments for health care existed in communist countries prior to the transition (Bara *et al* 2003; Gaal and McKee 2005).

THE problem of out-of-pocket payments, as a social problem, existing officially and being discussed in the public arena, dates back to 1997 when out-of-pocket payments were officially adopted. The problem attracted greater prominence with high levels of inflation; patients knew that they must pay, but for what, where and when, there was no precise or complete information.

AS to the initial magnitude of this phenomenon, we get some indication from a survey conducted in 1994 (Delcheva *et al* 1997). The data from this survey showed that 43% respondents paid for services that were officially free. Payments were made for a wide range of services and to different health care professions, including medical, nursing and ancillary staff. Payments to individuals during consultations were between 3% and 4% of average monthly income but the average cost for an operation was 83% of the mean monthly income. Balabanova and McKee's (2002) representative study, conducted in 1997, a year of particular socio-economic crisis and turmoil, found that 21% of males and 27% of females paid some informal payment in cash or gift at a state health establishment.

A consumer fee (or co-payment), determined as a percentage of the minimum wage, was introduced on 1 July 2000 for outpatients, and from 1 July 2001 for inpatients (in accordance with the National Health Insurance Act 1998). Even before the start of reforms in the primary health care sector, prior to 1 July 2000, the public was prepared to accept to pay for public health services, if the services provided were of a good quality and provided promptly (Pavlova *et al* 2000).

CLEARLY, problems associated with out-of-pocket payments in Bulgaria - formal and informal - pose a serious potential threat to the principle of equitable access enshrined in the social health insurance model. The above indicates that it would be both valuable and timely to conduct an empirical study in order to provide a solid foundation for the measurement of all kinds of expenditure which Bulgarians make for health care as a basis for investigating further the implications for social equity and health. The empirical study reported here sought to cast light on this important issue: equity in access to health care services and products in Bulgaria following introduction of the national health insurance system.

PURPOSE OF THE SURVEY

THE purpose of the reported survey was the collection and analysis of information necessary to establish the amount Bulgarian households spent on health care, which includes the purchase of outpatient and inpatient healthcare services, pharmaceuticals and healthcare goods, as well as payment for health insurance contributions. Survey findings provided the basis for estimating the amount of total healthcare expenditure in Bulgaria using the National Health Accounts methodology (OECD 2000). The study is distinctive in two main respects: first, the general household expenditure diary was not used. Instead a specialised health household expenditure diary was developed in order to provide a more precise calculation of household expenditure on health services and products. In addition, administration of the diary was followed up by a semi-structured face-to-face interview.

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SAMPLE

THE national sample incorporated two types of samples: the main sample, including 1000 households, plus complementary samples, which aimed to ensure valid, reliable and representative results for the main ethnic groups in the country - Bulgarians, Turks and Roma - and for elderly persons over the age of 65. The ethnic profile is 86% Bulgarian, 10% ethnic Turks and 4% Roma. The elderly comprise 16% of the population. Both the main and the complementary samples were representative, that is, their generation was based on the random selection principle. The global project size of the main and the complementary samples included 154 clusters (1540 households). While the planned size of the sample was 1540, the households surveyed and processed were 1512, that is a relative share of 98%, which indicates a high field realisation of the sample.

HAVING a general sample volume of n=3000, average internal cluster correlation of 6 = 0.10 and 30 persons surveyed on average per cluster, the expected sizes of the relative Δ% = (Δ/*P*) .100 and the maximum stochastic error Δ of different relative shares *(P)* would be as follows:

P	Δ%	Δ
5	30.8	1.5
10	21.2	2.1
15	16.8	2.5
20	14.1	2.8
25	12.2	3.1

THE full realisation of the main sample (households planned: 1000; households surveyed and processed: 1005) indicates that the survey findings were within the expected stochastic error values.

WITH reference to the Turks and Roma, and elderly people, higher values of the stochastic errors were observed due to the fact that the sizes of their samples were around 3 times smaller, which accounts for the increase in stochastic errors' values by around 1.7 times.

QUESTIONNAIRES AND METHODS FOR PRIMARY DATA COLLECTION AND PROCESSING

AS indicated above, two types of data collection methods were used to collect the necessary information: a household diary followed by a household questionnaire. The specially developed diary of household expenses, from 15 April - 14 May, 2002, was based on the method for studying die budgets of households used in the European countries utilising the methodology of the Classification of Individual Consumption According to Purpose, the statistical methodology introduced by the United Nations in 2001. What is distinctive with our methodology is that coding die expenses in the diary rested on classification of these expenses in accordance with this COICOP methodology combined with of the methodology developed for the calculation of National Health Accounts for the OECD (2000).

THE linking of the information from the diary with information gleaned from the sociological survey enriched the capacity for analysis of the personal health expenses by the criteria in accordance with income, composition of the household, place of residence, ethnicity, age, frequency of use of medical services, unregulated health services payments, self limitations by households in utilising medical goods and health services and the reasons for this, the satisfaction from the utilisation of different health institutions GP, outpatient,

inpatient, emergency), and the level of satisfaction with the health reforms as a whole. Nowhere in the literature have we found research of a similar nature pertaining to household expenditure on health services and resources.

Household diary

During the survey period of one month, information about healthcare expenditures that were incurred firing that period was entered in the diary on a daily basis. All household expenditures (between 15 April-14 May 2002) on drugs, physician consultations, transportation to the physician, deductibles, out-of-pocket payments and gifts to a health care provider, outpatient and inpatient health care services and examinations were registered on a daily basis. Expenditures were reported separately for each household member. Any pharmaceuticals (health services) utilisation entry was accompanied by a record of the specific coverage - free of charge, partially covered or fully paid; the manner of prescription - by physician, dentist or other health professional; as well as the specific treatment of the household member for whom the pharmaceuticals were purchased - person treated at home, hospitalised or for common household usage.

Household questionnaire

Following the end of the period for diary completion (not earlier than May 15), a standardised interview was held with the household member who completed the diary for the household. The Household Questionnaire registered the following:

- Information about the type and character of healthcare services utilised by the household member during two periods -the past month preceding the survey (March 2002) and during the previous year (2001);
- Information about the type and character of healthcare expenditures of each household member in the month prior to the survey (March 2002) and in 2001;
- Information about the health insurance status of household members;
- Opinions and evaluations of the health status, opportunities, obstacles and reduced utilisation of health care services and their payment;
- Socio-economic and demographic status of the household - social and labour status, sex, age, education, marital status, place of residence, ethnic identity, number of household members, household income for 2001.

The primary data collected from the household diary and household questionnaire were processed using the SPSSX standard software.

Organisation and field work

The field work was conducted in three stages. During the first stage (April 10-15. 2002), on the basis of the interviewers" written reports, the households to be surveyed were selected. Following the consent of the selected households to take part in the survey, each household was handed a household health expenditures diary and was instructed by the interviewer on data completion requirements and the household member to be in charge.

At the intermediary stage, the interviewer visited the households under survey at the end of April (between April 27-30, 2002), to ascertain the proper and timely recording of all health expenditures incurred. The family head or the household member in charge were asked if there were other health expenditures not registered in the diary and if any these were entered following the established order.

THE third major stage took place at the end of the field work period (after 14 May 2002). Each household was visited for a third time, in order to collect the completed household diaries and to interview the family head or the household member in charge.

HOUSEHOLD HEALTHCARE EXPENDITURES

WE need to elaborate here on the similarities and the differences between our survey and the monthly household budget surveys conducted by the National Statistical Institute. Such elaboration is necessary as there is a significant difference between the two surveys and subsequent results. Monthly healthcare expenditure is several times higher in our survey. These differences are attributable to the following:

FIRST, there were differences in the classification of the products and services registered as health expenditures. The food expenditures of inpatients, the household expenditures for personal, city, intercity or taxi transportation of the medical staff to and from the patient's home, the transportation household expenditures made to satisfy the household's healthcare needs, gratuity payments and so on were registered as health expenditures in this survey, while in the National Statistical Institute's survey they are incorporated into other sections.

SECONDLY, our household diary recorded a higher expenditure due to the rapid increase in the price of drugs and other medical goods and services, especially during the first quarter of 2002, due to the imposition of the value-added tax (VAT) on pharmaceuticals.

HOUSEHOLD health expenditures are strongly influenced by the organisational pattern of the health care system and the level and amount of expenditures which it covers. In relation to the latter, in 2002 health insurance contributions reimbursed by the National Health Insurance Fund were as follows (in million Leva): Outpatient Curative Care (256); Pharmaceuticals (131); and Inpatient Curative Care (100); to a total of 487 million Leva (approximately US$240 million). These amounts are very modest in terms of state expenditure since total public health expenditure amounts to only 4.3% of the GDP and represents a very slow rate of increase since 1990 (The Council of Ministers 2001).

HOUSEHOLD income levels also exert a major impact on household healthcare expenditures. While income levels have increased both in nominal and real terms across all types of monetary income (wages, pensions, social welfare) (see Table 3) since 1990, Bulgaria continues to experience widespread impoverishment. This is indicated by low GDP per capita ($1542 in 2000), the high relative share of food expenditures (over 40%), the large difference in the disposable income between the richest 20% and the poorest 20%, and the very high level of unemployment (varying between 16% and 18% in the period 1991-2002). All limit household capacity regarding the level of healthcare (National Statistical Institute 2002).

HOUSEHOLD HEALTH EXPENDITURES: SIZE AND STRUCTURE

AVERAGE HOUSEHOLD HEALTH EXPENDITURES: SIZE AND STRUCTURE

OVERALL, household health expenditures of all 1005 households under survey amounted to a total of 59 000 Leva. The households surveyed spent an average of 64 Leva (US$32) per month on health goods and services.

Table 3: *Income of the population and inflation rate, 1190 - 2000*

Absolute amounts (Leva) and percentages	1990	1993	1995	1997	1999	2000
Average monthly salary	545	3642	8612	168 720	206	241
Actual change on the basis of the previous year		-20%	4%	28%	4%	5%
Actual change since 1990		-60%	-68%	-77%	-74%	-73%
Average monthly pension	179	1247	2765	51 111	71	81
Actual change on the basis of the previous year		3%	9%	25%	15%	3%
Actual change since 1990		-59%	-69%	-79%	-73%	-73%
Inflation rate (%)	n.a.	n.a.	34	579	6	4

Source: Ministry of Labour and Social Policy.

Table 4: *Average household healthcare expenditures (Leva)*

Type of medical goods and services	Average annual healthcare expenditures per person (Leva)	Average annual healthcare expenditures per household (Leva)	Average annual healthcare expenditures per household Relative share (%)
Curative care	90	269	35
Including: - inpatient care - outpatient care - curative home care medical services	 12 77 1	 36 230 3	 5 30 -
Rehabilitation medical services	3	7	1
Pharmaceuticals	134	401	52
Health insurance contributions	20	60	8
Other	9	28	4
Total expenditures	256	765	100

Note: *Other includes prevention and public health services, long-term nursing and ancillary medical services.*

THE structure of healthcare expenditures, as summarised in Table 4, indicates the following:

FIRST, drugs dispensed to outpatients had the highest relative share: 52 % of the total amount of household healthcare expenditures. Expenditures for services of curative care ranked second: 35%. All other types of healthcare expenditures had a combined total of 13%.

SECONDLY, outpatient curative care expenditures represented 86% of the total amount of curative care expenditures while the relative share of inpatient care services was 14%.

THIRDLY, 82% of the total household healthcare expenditures were spent on outpatient goods and services.

FOURTHLY, for an average three-member household, every household member spent annually 255 Leva on healthcare services, which amounted to 15% of the total average annual income per household member (1672 Leva in 2001). Such an amount of healthcare expenditures per person means that in 2002 the Bulgarian population paid out-of-pocket healthcare expenditures amounting to over 2 billion Leva ($1 billion).

FINALLY, the minimum average monthly healthcare expenditures per household in 2002 provided it was not utilising any medical goods and services but only paid the obligatory health insurance contributions was less than 5 Leva, and less than 2 Leva per person. The maximum average monthly healthcare expenditures per household in 2002, provided it had incurred expenditures equal to the average expenditures on all categories defined by the OECD international classification of health care accounts, amounted to 221 Leva, or 74 Leva per person.

IMPACT OF SOCIO-DEMOGRAPHIC FACTORS ON HEALTHCARE EXPENDITURES

DIFFERENT socio-demographic factors influenced the size of household healthcare expenditures. Most important in this respect were the following: level of income; place of residence; age and ethnicity.

HEALTHCARE EXPENDITURES BY LEVEL OF INCOME

THE size of households' income has a determining influence on the structure and size of expenditures. Regardless of the fact that it is frequent for healthcare expenditures to be of an imperative character, eventually it is the household budget capacity that determines the imposition or non-imposition of restrictions on healthcare expenditures. In order to ensure a higher degree of correspondence between the analysed income and expenditures of households, the information about income reflects the month preceding the collection of information on healthcare expenditures, namely March 2002. The total average income per household was 283 Leva and 94 Leva per household member (less than US$50 per household member).

CONSIDERABLE differences were established between incomes of households belonging to different ethnic groups. The level of income was lowest for the Roma, where more than two thirds of the households reported an income less than 150 Leva (Figure 1).

FURTHERMORE, village households tended to belong to lower income groups, whereas more than one-third of town households belonged to the highest-income groups (Figure 2).

EXPENDITURES on medical goods and services by households belonging to different income groups indicated considerable differences (Table 5).

THERE was a very clear tendency towards increase in the total amount of healthcare expenditures as income increased. The difference in the absolute amount of expenditures

between the lowest income group, up to 100 Leva, and the three groups with highest income, was three-fold. The analysis of the relative share of healthcare expenditures from the average income by separate household groups indicates that low-income households carried the heaviest burden (Figure 3). Households from lowest-income group spent 39% of their average income on healthcare goods and services. This compares to 24% in the case of households from the income group of 201 to 300 Leva, and 12% from the highest income group (over 500 Leva) The data in Figure 3 show that health care expenditure as a relative proportion of monetary income is generally higher in the lower income households. Approximately 70% of the surveyed households reported monthly healthcare expenditures as a proportion of average income higher than those reported in countries in the European Union (WHO 2002).

THE relative household budget burden is influenced by the extent to which the National Health Insurance Fund and/or the state covers household healthcare expenditures. Access to free-of-charge and/or partly covered medical goods and services for the health insured is negotiated periodically through the National Framework Contract. The NHIF accounts for only a small proportion of household healthcare expenditures. At the same time, due to the lack of state financed special programs to facilitate access to medical goods and services for persons from low-income groups, the latter tend to be in relatively less favourable positions and exposed to higher social risk. AN indication of that is the distribution of households from different income groups according to the level of cash payments for health goods and services (see Table 6).

THE data from Table 6 indicate that households covered the bigger part of medical goods and services expenditures, while the share of those free of charge or partly paid formed only a small portion. At the same time, no tendency towards an increase r. the share of free-of-charge and partly covered services was identified as far as low income household groups are concerned. The small differences between the relative shares were most probably due to the lower level of medical goods and services utilised by low income households (see Table 5).

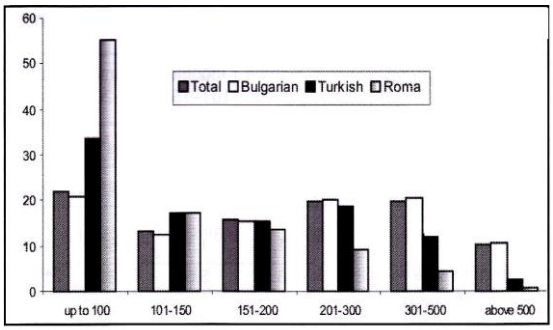

Figure 1: % Distribution of households from different ethnic groups by income level (Bulgarian Leva)

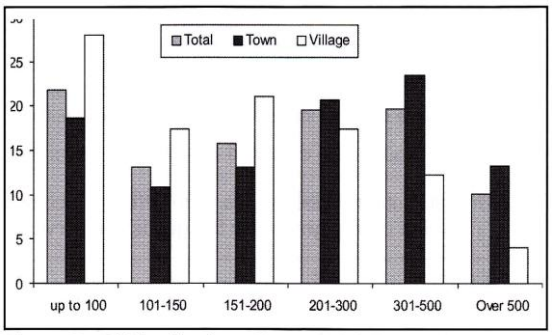

Figure 2: % Distribution of households by monetary income (Leva)

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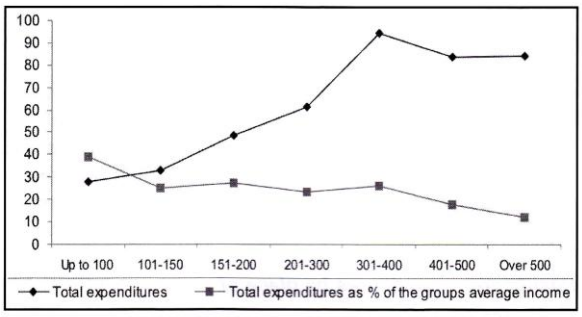

Figure 3: % Average monthly healthcare expenditures by income group (Leva)

Table 5: *Average monthly healthcare expenditures by income group (Leva)**

Type of expenditures Curative care services	Income ≤100	Income 101-150	Income 151-200	Income 201-300	Income 301-400	Income 401-500	Income >500
	Healthcare expenditures (Leva)						
	6.50	6.89	16.25	25.43	44.48	37.24	31.74
Including: - inpatient care	1.05	1.13	3.60	4.09	3.94	3.24	4.49
- outpatient care	5.27	5.39	12.33	21.22	40.48	33.44	27.25
- curative home care services	0.18	0.37	0.32	0.13	0.06	0.56	0.0
Rehabilitation services	0.0	0.52	0.17	0.33	0.51	4.01	0.08
Long-term nursing care	0.0	0.0	0.0	0.0	0.52	0.05	0.0
Ancillary medical services	0.97	1.62	1.91	1.89	3.83	2.27	3.37
Medical goods to outpatients	20.73	23.99	30.35	33.88	44.85	40.16	49.31
Prevention and public health services	0.0	0.1	0.0	0.03	0.0	0.0	0.0
Total	28.19	33.04	48.68	61.55	94.19	83.73	84.50

** Total expenditure does not include health insurance contributions*

Table 6: *Distribution of households from different income groups on the basis of the level of cash payment for the goods and services (%)*

Level of payment	Total	≤100 Leva	101-150	151-200	201-300	301-400	401-500	>500 Leva
Free of charge	5.0	7.5	4.3	4.7	4.1	5.3	6.5	3.7
Partly paid	7.6	6.9	5.0	8.9	8.8	8.3	6.6	6.9
Fully paid	87.2	85.1	90.6	85.8	87.0	86.2	86.8	89.3
Difficult to estimate	0.2	0.5	0.1	0.6	0.1	0.2	0.0	0.0

HEALTHCARE EXPENDITURES BY PLACE OF RESIDENCE

THE place of residence (Sofia, town, village) influenced the size and structure of healthcare expenditures due to the limited access to general and specialised care (see Table 7).

ANALYSIS of the size of expenditures by place of residence reveals:

FIRST, Sofia households spent one and a half times more on healthcare goods and services in comparison to the average expenditures by regional households, and nearly two times more than village households.

SECONDLY, expenditure of households from regional towns was 106% of the average expenditure of households for health care, while that of households from small towns was 112%.

THIRDLY, village household expenditures represented 76% of the average total healthcare expenditures.

Table 7: *Average monthly household healthcare expenditures by place of residence (Leva)**

Expenditure type	Total	Sofia	Regional town	Town	Village
Curative care	22.41	34.69	24.98	27.37	11.83
Including:					
- inpatient care	3.01	4.22	3.96	2.71	1.77
- outpatient care	19.19	29.98	20.89	24.40	9.91
- home treatment medical services	0.21	0.49	0.13	0.26	0.15
Rehabilitation services	0.62	-	0.64	2.00	0.03
Long-term nursing care	0.07	-	0.10	0.20	-
Ancillary medical services	2.16	2.13	2.07	2.19	2.25
Medical goods to outpatients	33.45	50.11	33.36	32.17	27.18
Prevention and public health services	0.10	-	0.02	-	
Total expenditures	58.81	86.93	61.17	63.93	41.44

** Total expenditure does not include health insurance contributions*

Table 8: *Average monthly healthcare expenditures by ethnic group (Leva) **

Type of expenditure	Bulgarian	Turkish	Roma
Curative care	23	12	9
Including: - inpatient care	3	5	5
- outpatient care	20	7	4
- home treatment medical services	-	-	-
Rehabilitation services	1	1	-
Long-term nursing care	-	-	-
Ancillary medical services	2	2	1
Medical goods for outpatients	35	24	20
Prevention and public health services	-	-	-
Health insurance contributions	5	6	7
Total expenditures	66	45	37

** Total expenditure does not include health insurance contributions*

Healthcare expenditures by ethnic group

The size and structure of healthcare expenditures showed significant variation in health spending based on ethnic group (see Table 8).

Healthcare expenditures of ethnic Bulgarian households represented 103% of the total average healthcare expenditures of all households surveyed (Table 8). Each member of those households spent an average of 23 Leva. This accounted for 111% of the total average expenditure per person in all surveyed households. The structure of expenditures indicated that the relative share of outpatient care expenditures was the highest, accounting for over 86% of all expenditures.

Average healthcare expenditures of a Turkish household amounted to 45 Leva, or 71% of the total average expenditure per household. The average expenditure per person was 12 Leva. Here again, the major part of expenditures went to outpatient care.

Roma households' average healthcare expenditures amounted to 37 Leva. The average expenditure per household member was 8 Leva. This represented only 58% of the average total expenditures of all households surveyed. The structure of expenditures was similar to that of the other ethnic groups, but all types of expenditures had considerably lower absolute values.

Equity in the size of expenditure and in medical goods and services utilisation

The findings indicate that the following factors have to be taken into consideration when analysing equity in access to healthcare resources: household income, place of residence, ethnicity and age. It should be noted that the influence of these factors is combined and the negative influence of one usually reinforces the negative impact of the others. Thus, negative influences tended to operate cumulatively leading to both relative and absolute increases in health care inequity.

The survey results showed that the main factor influencing the size of household healthcare expenditures for medical services and goods was level of income. The negative influence of this factor on equity of access to healthcare resources is most clearly demonstrated when comparing the relative shares of healthcare expenditures by different income groups. The NHIF's approach to fully or partially cover the expenditures for certain pharmaceuticals to one and the same extend for all income groups further aggravated the elements of negative influence on income stratification.

From the point of view of place of residence those living in small or remote locations experienced more restricted access to healthcare resources because of the necessity to travel long distances and/or to pay additional transport costs. This inequity is exacerbated by difficulty experienced in accessing specialised care due to remoteness. In winter, this remoteness turns into a significant obstacle for residents of mountainous and semi-mountainous regions due to the fact that many of the roads are closed. The possibility of gaining access to state-covered emergency on urgent care is also limited because of the lack of telephone or telecommunication connections and/or of mobile telephone coverage. Inequity in access by place of residence was especially marked for older people. The relative share of elderly people from villages who used fully or partly covered NHIF goods and services amounted in 10%, compared with 26% of elderly people in Sofia and 22% in regional towns.

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THE survey results also indicated that ethnicity was strongly associated with differential access to health resources for persons from different ethnic groups. This is particularly marked from members of the Roma ethnic group who demonstrated a considerably lower rate of household expenditure for medical goods and services, and a lower level of utilisation of full or partly covered medical services and goods is indicated in Figure 4.

FINALLY, the older age of household members was significantly correlated with an increase in the proportion of healthcare expenditure. This became more pronounced with a progressive decrease in income and rendered older people's access to healthcare resources considerably more constrained than their younger counterparts. On the other hand, the level of healthcare expenditures of children aged 15 and under, was very high, especially among children from the Roma ethnic group.

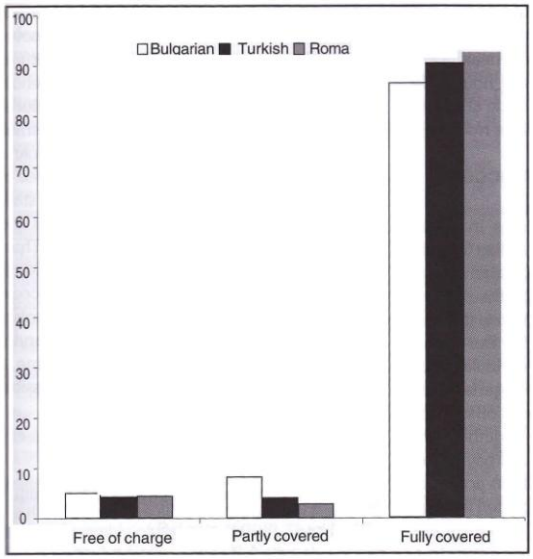

Figure 4: % Distribution of persons from different ethnic groups depending on the level of utilisation of free of charge, partly covered or fully covered medical services and goods

DISCUSSION

HEALTH expenditures are an important item in the household budget due to the fact that they ensure the maintenance, improvement and reproduction of one of the most precious social goods: human health. In Bulgaria, despite the introduction of a universal health insurance system, the better part of household health care expenditure is imperative rather than discretionary. This exerts a significantly inequitable impact on households. Such a consequence is largely attributable to changes in the philosophy, organisation and funding of the Bulgarian health-care system since 1990. The most significant of these changes has involved the introduction of official co-payments for health care services together with the continuing practice of under-the-table payments for pharmaceuticals and other health care goods and services. Average household expenditure on healthcare equals 21% of total household income. This relative share of income is higher than that expended in European Union countries and is extremely onerous for the majority of Bulgarian households.

DESPITE the high level of expenditure on the part of households and the correspondingly low levels of health expenditure by the state through the budget and the NHIF, there are no national, regional or local programs that aim to achieve fairer and more equitable access to health resources for those groups who are least able to purchase health

care privately: the poor, Roma, older persons, and those living in towns and villages. In fact, our research suggests that the poorest and the richest households rely on their private capacity to purchase health care. Services that are provided free of charge or partly paid by the state account for less than 15% expenditures; and this proportion is virtually the same regardless of household income. In real terms, high income groups are in receipt of more state support than low income groups. Thus, the universal health insurance system is regressive in its effect, rather than progressive.

EXACERBATING this problem is the issue of unregulated gratuity payments and corruption in the health sector. This 'grey economy' operates outside the regulatory framework and does not pay taxes. During the surveyed period, over 12 % of the households paid unregulated sums to municipal and state health care establishments. These sums varied between 20 and 210 Leva in inpatient facilities, and up to 40 Leva to see a doctor. This may help to explain why 13% of households failed to approach their general practitioner as they could not afford to pay for the consultation. At the same time. 29% of those who needed to consult a specialist and had a referral from their GP failed to do so. The above- mentioned data point to the existence of corruption (the grey economy) in the health sector which undermines efforts to carry out health-care reforms. These illegal costs increase household health expenditures and further impede attempts to achieve equitable access to healthcare resources.

IMPLICATIONS FOR EQUITY OF ACCESS TO HEALTH CARE

UNIVERSAL health insurance systems in social democratic countries such as Australia, Canada and Bulgaria aim to ensure that all citizens have equal access to basic health care on the basis of health need rather than the ability to pay (Palmer and Short 2000:257-258). The European Observatory on Health Care Systems (Koulaksazov *et al* 2003: 90) country report for Bulgaria raised the concern that the introduction of official co-payments for health care services, together with the continuing practice of unregulated payments, could work against achieving equity in access to healthcare services. This study, conducted through administration of a household healthcare expenditures diary plus a household survey to a random sample of households (n= 1512) in 2002, indicates that the aspiration of equity of access to health care was seriously compromised in the period under investigation. The study identified more limited access to health resources for disadvantaged social groups: most notably the poor, Roma, older persons, and those living in remote towns and villages.

THE study brought to light restricted utilisation of health care services by a considerable portion of Bulgarian households. Low-income households carry the heaviest burden, with households from the lowest income group spending 39% of their income on health care, compared with 12% in the highest income group. Approximately 70% of Bulgarian households are spending a higher proportion of their income on health care than their counterparts in the European Union. For the majority of households healthcare expenditure is incongruent with their financial ability to pay. This very inconsistency between abilities and needs is at odds with the principle of equity that underpins the universal health insurance system.

THE extent to which the Bulgarian National Health Insurance Fund and/or the state cover part or all of household healthcare expenditures can considerably relieve or increase the household budget burden. Yet the state and the National Hearth Insurance Fund account for a very small proportion of health care expenditure. Only a tiny proportion of health care is

provided free of charge or partly paid by the NHIF or the state (13% in the case of the poorest households and 11% in the case of the richest households). Thus the national health insurance system virtually no impact in ensuring equitable access to health care. In the transition from communism and a command economy to democracy arc • I market economy, health care has become a commodity rather than a right; more accessible to those with the ability to pay.

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