Inequalities in health care use and expenditures: empirical data from eight developing countries and countries in transition

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This paper summarizes eight country studies of inequality in the health sector. The analyses use household data to examine the distribution of service use and health expenditures. Each study divides the population into ''income'' quintiles, estimated using consumption expenditures. The studies measure inequality in the use of and spending on health services. Richer groups are found to have a higher probability of obtaining care when sick, to be more likely to be seen by a doctor, and to have a higher probability of receiving medicines when they are ill, than the poorer groups. The richer also spend more in absolute terms on care. In several instances there are unexpected findings. There is no consistent pattern in the use of private providers. Richer households do not devote a consistently higher percentage of their consumption expenditures to health care. The analyses indicate that intuition concerning inequalities could result in misguided decisions. It would thus be worthwhile to measure inequality to inform policy-making. Additional research could be performed using a common methodology for the collection of data and applying more sophisticated analytical techniques. These analyses could be used to measure the impact of health policy changes on inequality.

Keywords: health expenditures; health policy; health services accessibility; patient acceptance of health care; social justice.

Introduction

This paper summarizes results and draws cross-country conclusions from a set of studies of inequality in the allocation of resources in the health sector. The research was inspired by a study to measure health sector inequities in selected countries of the Organisation for Economic Co-operation and Development (OECD) (*1*). Its overall purpose is to begin to adapt and apply methods developed in the OECD study, in a simplified manner.

These methods are applied in this paper to developing countries and countries in transition. There is generally little reliable quantitative evaluation of the inequalities that exist in developing countries, in terms of either health status or access to care. Results from the application of tools to measure inequalities can therefore be important inputs into the decision process for resource allocation in the health sector in these countries. Empirical measures of the effects on inequality of resource generation and allocation decisions are major additions to the information base for making and evaluating policy decisions. In addition, the analytical methods employed here could be used to measure ex ante the impact of specific policy changes on inequality.

The following analysis of the socioeconomic distribution of health service use and household health expenditures uses existing national and subnational household survey data and a common methodology across countries. Each country study divides the population into per capita "income" quintiles — generally using the level of household consumption expenditures as a proxy measure of income. The results of the studies are divided into two broad categories: use of health care and health expenditures. For each of these categories, indicators are compared across the quintiles. The section on

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health care use includes analysis of the type of providers consulted.

In this research, a simple measurement of inequality is used, as opposed to the more complex and nuanced notion of inequity (1). In the examination of the use of health care, variations from equality of use when ill or injured are considered, by socioeconomic group. The comparisons made on expenditures use the simple measure of variation from equality. Lack of confidence that the available data accurately measure absolute income levels[a] means that reliable comparisons of health expenditures as a share of income are not possible.

Included in the analyses are data from the following eight developing countries and countries in transition: Burkina Faso, Guatemala, Kazakhstan, Kyrgyzstan, Paraguay, South Africa, Thailand, and Zambia.

Background: previous research
In their study for the OECD referred to above, Van Doorslaer, Wagstaff & Rutten (1) define many of the issues related to equity in the health sector and compare equity in health care financing and the distribution of health services in 10 industrialized countries. These workers had access to detailed tax and financing information, in addition to household surveys from each of the countries. In developing countries, reliable data for the financing of health services are often not available, complicating the estimation of equity in the financing of health care.

Studies by LeGrand (2) and Mapelli (3) measured equity using indicators of health status in the United Kingdom and Italy, respectively. O'Donnell & Propper (4) studied the distribution of National Health Service (NHS) resources in Britain, comparing utilization and expenditures among income quintiles. They calculated the average number of physician visits, inpatient stays, and average NHS expenditure, and found evidence of a slightly pro-poor bias in the distribution of NHS resources.

Studies of health sector inequality in developing countries have found that the distribution of public health services is unequal. For example, in Indonesia in 1990, only 12% of government spending for health was for services consumed by the poorest 20% of households, while the wealthiest 20% consumed 29% of the government subsidy in the health sector (5).

Baker & van der Gaag (6) compared health status indicators, use of health services, and health expenditures across quintiles and rural/urban areas in five developing countries. Their study used the same definition of access to health care — the use of health services during the survey recall period by persons with self-reported morbidity — as the studies that we summarize here. Baker & van der Gaag's results show

that the percentage of those with an illness or injury who receive health care varies widely by consumption quintile in these countries.

Beyond these results, there are few quantitative estimates of health sector equity or inequality in developing countries. The results reported here make a preliminary effort to fill this gap, building on the work of Van Doorslaer, Wagstaff & Rutten (1) and of Baker & van der Gaag (6) — inspired by, adapting, and applying their techniques to a wide range of developing country and countries in transition settings.

Countries and data sources for the study
Table 1 provides basic information on the eight countries that are included in this study. These countries vary in size — from populations of approximately 4.5 million in Kyrgyzstan to 58.2 million in Thailand — as well as in income level. Measured in purchasing power parity terms, GNP per capita in the eight countries in 1995 varied from US$ 780 in Burkina Faso to US$ 7540 in Thailand.

The countries also vary in terms of the health status of their populations and the nature of their health systems. Life expectancy in Burkina Faso and Zambia, the latter particularly affected by the human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) pandemic, is just 49 years and 46 years, respectively; and in Kazakhstan and Kyrgyzstan, both countries of the former Soviet Union, it is 69 years and 68 years, respectively.

The countries of the former Soviet Union inherited socialist health systems with wide coverage rates and little private sector provision of services. The other countries have a mixture of public and private provision; in Burkina Faso, South Africa, and Zambia, traditional medicine also represents an important source of health care for many people.[b] Public sector health spending, measured on a per capita basis, is relatively low in all eight countries, ranging from under US$ 2 in Burkina Faso to almost US$ 105 in South Africa.

Table 2 describes the principal data sources used in the country studies. At least one major household survey was employed in each country. In each of the eight countries, existing household data sets were used for the research reported in this paper. The surveys are not standardized across countries. All of the data sets include information on the consumption level of the household (measured by expenditures),[c] individuals' self-reported illnesses and injuries in a defined recall period, and actions taken by those who reported illness. The surveys all also include information on the type of provider consulted, if any, and direct expenditures on health care for those seeking care.

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[a] The data available (largely self-reported consumption expenditures) are, however, considered reliable for dividing the population into relative income groups.

[b] The health systems of each of the countries are described in detail in the individual country studies, some of which are available upon request from the Partnerships for Health Reform (PHR) Project, Abt Associates Inc., 4800 Montgomery Lane, Bethesda, MD 20814 USA.

[c] The Burkina Faso analysis includes estimation of the value of own consumption of agricultural products by subsistence farmers.

Table 1. **Basic country indicators[a]**

Country	Popu-lation (x 10^6)	GNP per capita (US$)	GNP per capita (US$–PPP)[b]	Life expectancy at birth (years)	Infant mortality rate per 1000	Public per capita health expenditure (US$)	No. of doctors per 100 000 (1993)	No. of nurses per 100 000 (1993)
Burkina Faso	10.4	230	780	49	99	1.90	2 (1990)	60 (1990)
Guatemala	10.6	1340	3340	66	44	12.06	90	30
Kazakhstan	16.6	1330	3010	69	27	29.26	360[c]	1110[d]
Kyrgyzstan	4.5	700	1800	68	30	25.90	310[c]	–
Paraguay	4.8	1690	3650	68	41	42.25	67	10
South Africa	39.9	3160	5030	64	50	104.75	59	175
Thailand	58.2	2740	7540	69	35	38.36	24	99
Zambia	9.0	400	930	46	109	6.54	9 (1990)	167 (1990)

[a] *Sources*: Country case studies; *World development report 1995* and *1997*; and *Human development report 1998*. All figures for 1995, except where indicated.

[b] PPP = Purchasing power parity used as conversion rather than exchange rates.

[c] In countries of the former Soviet Union, one of the reasons for the higher number of medical doctors is that this number includes some professions that would not be considered so in other countries (e.g., hospital administrators and others with medical degrees).

[d] The number of nurses per 100 000 for Kazakhstan includes all middle-level health personnel, including nurses, feldshers, midwives, etc.

Table 2. **Details of the main household survey used**

Country	Survey name	Year	Geographical area	% national population covered	Repres-entative	Sample size	Recall period
Burkina Faso	Burkina Faso Household Survey	1994	3 provinces	6	No	2 175	2 weeks
Guatemala	Household Health Care Demand and Expenditure Survey	1997	4 departments	15	Yes	14 824	30 days
Kazakhstan	South Kazakhstan Oblast Household Health Utilization Survey	1994	1 *oblast* (region)	12	No	6 818[a]	4 weeks
Kyrgyzstan	Social Services Household Survey	1996	2 regions	_	No	2 901[a]	4 weeks
Paraguay	Demand and Expenditure Survey	1996	6 departments	50	Yes	11 750	2 weeks
South Africa	Living Standards and Development Survey	1993	National	100	Yes	40 284	2 weeks
Thailand[b]	Socioecononomic surveys (for expenditures)	1986	National	100	Yes	10 814[c]	—
	Socioecononomic surveys (for expenditures)	1992	National	100	Yes	13 458[c]	—
	Health and welfare surveys (for health actions)	1986	National	100	Yes	79 189	2 weeks
	Health and welfare surveys (for health actions)	1991	National	100	Yes	94 964	2 weeks
Zambia	Living conditions monitoring survey	1996	National	100	Yes	61 547	2 weeks

[a] The Kazakhstan and Kyrgyzstan surveys have incomplete information on consumption and some health questions, so the effective sample sizes are considerably smaller.

[b] The analyses performed for Thailand combined data from the socioeconomic and health and welfare surveys.

[c] For the two socioeconomic surveys in Thailand the figure given is for the number of *households* in the sample, not individuals.

There are, however, important differences among the surveys. The sample sizes varied, as did the geographical areas covered and the statistical power of the surveys to explain what is occurring in the countries. The surveys in South Africa, Thailand, and Zambia were nationally representative and had

large sample sizes. The other surveys were not representative at the national level but were statistically representative of specific geographical regions, covering different proportions of the national population, as indicated in Table 2. The Burkina Faso survey gathered information on health care seeking behaviour in three mainly rural provinces. Within each of the provinces, a random sample of 624 households was drawn. Thus, the sample is random and representative of each of the provinces. The Kazakhstan and Kyrgyzstan surveys were conducted using random sampling techniques and include sample weights. These two surveys, however, provide incomplete data on many key questions — including household consumption and health care seeking data. As a result, the effective sample sizes for most of the analysis are smaller than the full samples for these two studies. Because the missing observations may be different in important ways from the ones for which there are data, the two surveys cannot be considered statistically representative.

The limitations of the surveys affect the degree of generalization that may be made from their results for national or subnational policy. Nonetheless, the survey data do permit the purposes of this research to be realized, i.e. the data allow a first attempt to be made to measure inequality in the health sectors of the countries studied.

One additional caution is in order in interpreting the results presented. Since the surveys were conducted independently of one another, the questions concerning health care seeking behaviour, expenditures on care, etc. were not all asked in the same way. Further, respondents in different cultures with identical objective conditions are likely to respond differently even to identically formulated questions. Thus, this paper does not make comparisons of the results among the countries, nor does it recommend that others do so.

Methodology: defining and measuring inequality

The studies reported here measure deviations from equality in various dimensions of the need for, use of, and spending on health services. They do not attempt to measure equity or inequity. The limitations of the data sets available for the work make a pragmatic approach necessary. Thus the information is presented in the form of deviations from equality among several measures, without drawing normative conclusions.

To quantify the variations, the country studies perform comparisons among "income" quintiles (see below). The results, calculated in this manner and presented both numerically and graphically, are readily comprehensible by policy-makers. More complex analysis, using concentration curves and indices, as described by Van Doorslaer, Wagstaff & Rutten (1), may be conducted in the future.

To measure inequality in terms of either illness or the use of health services across different socioeconomic groups, we need to establish a definition of economic status. The level of *consumption* is generally recognized as a measure that is superior to point measures of income, since a point estimate of income reflects neither longer-term income nor permanent wealth, and can be seasonally variable (7).[d] Further, consumption data gathered in household surveys are considered more reliable than self-declared income. Consumption is equal to the total value of household expenditures measured over a specific period of time. Thus, consumption is used in this analysis as an estimate of long-term "income".

The studies all use self-reported consumption expenditures as the "income" level of the households, relative to other households in the given sample, to divide each sample into five equal-sized groups (quintiles), ranked from lowest (Q1) to highest (Q5) per capita consumption spending.

This paper summarizes the results of the inequality analyses organized as described below. In each case, the results are presented by "income" quintiles. The results are presented for all or most of the country studies for each of the following categories:[e] the percentage of those reported ill or injured that seek and receive health care;

– the percentage of those seeking care that are seen by a doctor;
– the percentage of those seeking care that go to a hospital;
– the percentage of those seeking care that go to a private provider;
– the percentage of those sick that received medicine;
– average expenditures on drugs for those ill;
– per capita annual household health expenditures;
– health expenditures as a percentage of all household consumption.

Results

Health care use

The patterns of care seeking among the income quintiles indicate that wealthier population groups have a higher probability of obtaining health care when they need it. Fig. 1 shows that there is an upward trend by quintile in health care use for those reporting illness in all of the countries for which data are available, with the exception of Kyrgyzstan, where the picture is mixed.

The proportion of individuals seeking health care and who are seen by a doctor is quite low in

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[d] Consumption measured by expenditures is not a perfect measure of welfare since it does not capture consumption that was not directly paid for, such as food produced and eaten at home and 'rents' for owner-occupied homes (8, 9). Among the household surveys used for the analysis in this paper, the Burkina Faso survey includes estimated values of the household's consumption of its own production.

[e] In cases where countries are omitted from the tables and graphs, the country studies did not include an analysis of the category in question. Several of the country studies include analyses in addition to those included in this summary, in particular analyses related to the duration of episodes of illness, antenatal care, and deliveries.

Burkina Faso — just 13% of those reporting morbidity during the recall period. But in each of the other country studies for which the relevant data are available, more than half of the individuals seeking care reported being seen by a doctor (Fig. 2) — ranging from 65% in Kyrgyzstan to 79% in Guatemala. As shown in Fig. 2, the wealthier quintiles are generally more likely to be seen by a doctor than are poorer groups.[f]

In contrast to being seen by doctors, there are no clear patterns in terms of the proportion of those ill who are treated in hospitals (Fig. 3). In Guatemala, there is a clear trend that wealthier individuals are more likely to receive care in a hospital; however, in Kazakhstan, Kyrgyzstan, South Africa, and Zambia, this pattern is reversed.

The underlying explanations for the patterns in hospital treatment are likely to be country-specific. In Kazakhstan and Kyrgyzstan there are more hospitals in rural and poorer areas than is the case in other countries. Further, the difference in quality of care between hospitals and ambulatory facilities is great. In other countries, the use of hospitals is clearly correlated with use of the public sector; hospitals tend to be predominantly public. Since wealthier households are more likely to use private care (see Expenditures, below), they are also less likely to use hospitals.

Not all of the country studies contain sufficient information to analyse the use of private providers. Among those that do, only Guatemala and South Africa show a clear pattern supporting the conventional view that wealthier households are more likely to use the private health sector (Table 3).

In general, however, the studies show that the private sector plays an important role as a provider of health care, serving between 56% and 60% of those who sought care in Guatemala, Paraguay, and South Africa.[g] In Thailand, although the overall percentages using the private sector are relatively low, they nevertheless show a clear trend that richer groups disproportionately use private providers. In the 1986 Health and Welfare Survey in Thailand, just 3.3% of those in the poorest quintile who were sick used a

[f] The figures for Kazakhstan and Kyrgyzstan are somewhat distorted by the small sample sizes for the surveys in those countries, but theystill demonstrate an underlying pattern favouring the richer quintiles. In these countries of the former Soviet Union, doctors continue to play a dominant role in the health system. The data for Thailand are not available in the same format, but show that the percentage of sick individuals who sought care and were seen by a doctor rose from 18% in 1986 to 38% in 1991. The richer quintiles saw doctors more than the poorer in both 1986 and 1991 in Thailand. In 1986, 14% of ill persons in the poorest quintile saw a doctor, while the corresponding proportion was 23% for the richest quintile.

[g] In the case of South Africa, there were problems with the Living Standards and Development Survey (LSDS) questionnaire that led the researchers to suspect that the levels of private sector utilization may have been overestimated. Another nationally representative household survey, the 1995 October Household Survey (OHS), reports lower levels of use of private sector services (39% overall). The OHS levels are particularly lower than the LSDS results in rural areas. However, the patterns are the same: in both surveys the percentage that used private services increases with estimated incomes in both urban and rural areas.

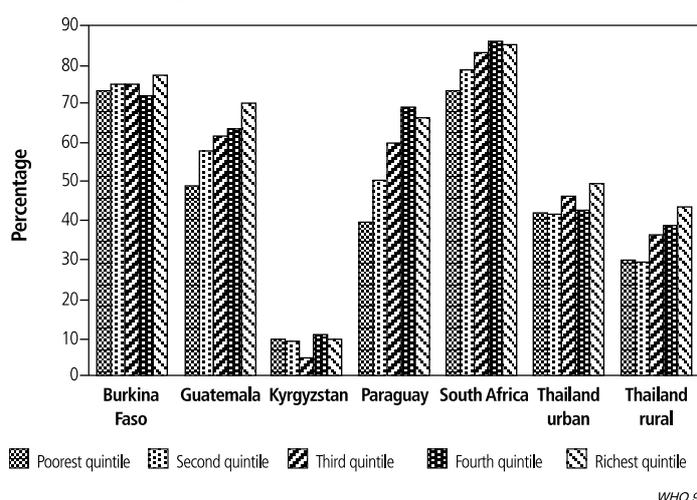Fig. 1. **Percentage of sample seeking care when ill around 1995**

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Fig. 2. **Percentage of those seeking care that are seen by a doctor**
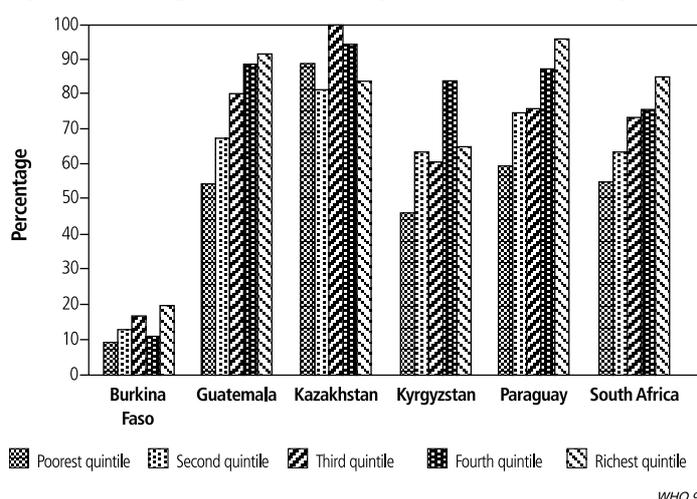

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Fig. 3. **Percentage of those seeking care that go to a hospital around 1995**

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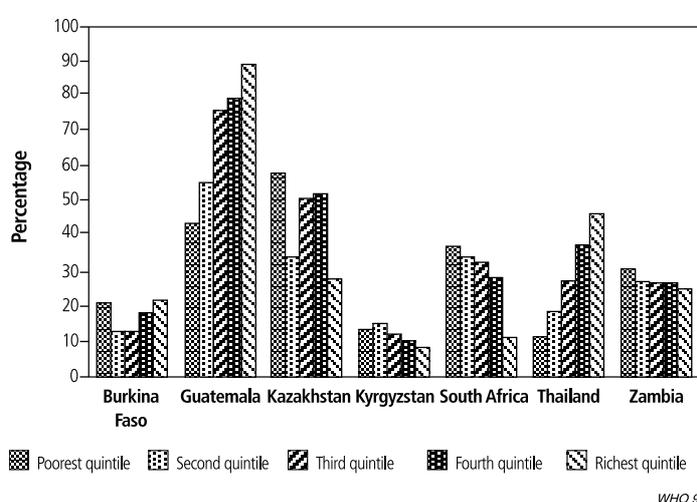Table 3. **Percentage of those seeking care who went to a private provider, by quintile**

Country	%, by quintile (poorer to richer)					
	Q1	Q2	Q3	Q4	Q5	Average
Guatemala	39	44	66	59	76	60
Paraguay[a]	70	74	57	56	67	56
South Africa[b]	37	43	45	55	83	58
Thailand (1991)	8	11	16	20	27	15
Zambia[b]	16	18	23	21	22	20

[a] Social security facilities are considered to be public.

[b] Includes traditional healers.

private clinic, compared with 20.3% for the wealthiest quintile. The proportion of all income groups using private providers rose between 1986 and 1991. In the 1991 survey, 8.2% of the poorest quintile used private clinics and hospitals, compared with 27.0% for the richest quintile.

The definition of "private health care provider" used in the South Africa and Zambia studies includes traditional healers. This may account for the relatively high reported use of private providers among Zambia's poorer income groups. In South Africa, by contrast, Q4 and Q5 make much greater use of private providers than the other quintiles, even when traditional healers are included. In South Africa, the higher use of private providers by wealthier groups is closely related to supply factors; for-profit private providers of 'modern' medical services and insurance coverage are available almost exclusively to the richer groups. Table 4 shows that richer groups are more likely to receive medicines when they are ill, except in Paraguay where this pattern is reversed.

Expenditures

To understand household expenditures on health, it is helpful first to examine the distribution of overall household expenditures. Table 5 summarizes these by showing average annual per capita consumption by household, as estimated from the survey data.

These data in Table 5 clearly differ from the per capita GNP figures estimated by the World Bank and reported in Table 1. In general, the differences arise because several of the surveys reported in this study are for subnational samples, covering relatively poorer parts of the country. In Burkina Faso, for

example, the US$ 181 annual per capita consumption level is less than the US$ 230 per capita GNP value reported by the *World development report 1997*. The Burkina Faso Household Survey used in this study excludes better-off regions of the country, including Ouagadougou, the capital.[h] Similarly, the survey analysed here for Guatemala was carried out to study health care seeking behaviour and spending in areas heavily populated by Mayan Indians. Since Mayan Indians tend to be poorer on average than other groups in Guatemala, it is not surprising that the consumption figures reported here are relatively low.

Differences also arise from specific conditions. In Kazakhstan and Kyrgyzstan, for example, at the time of the surveys, the government supplied housing and utilities at no direct cost or at a highly subsidized rate to the households. This makes the reported consumption spending lower than it would be if households had paid full housing and utilities costs.

For the above reasons, the data in Table 5 should be viewed as indications of the *relative level* of consumption only — in other words, the consumption levels are reliable for placing households in the five quintiles, but not necessarily for measuring levels of welfare overall.

The distribution of overall household consumption among the different quintiles provides a context for examining inequality in the health sector (Fig. 4). Even though the distribution of consumption alone does not provide direct information about individuals' health status or health care seeking behaviour, this information can help to explain observed differences in the health sector. Moreover, differences in health spending by quintile can usefully be compared with differences in overall levels of consumption.

The distribution of overall consumption spending is highly unequal in all of the country studies where data are available. In each of those countries, the wealthiest quintile consumes more than 42% of all household consumption, and in some countries a considerably higher percentage — 58.6% in Burkina Faso and 64.3% in South Africa.

Table 6 presents data on annual per capita household health expenditures. In all countries but South Africa and Zambia, the levels of household health expenditures calculated from the household surveys are considerably higher than the levels of *government* per capita health expenditures reported in Table 1 and repeated in the final column of Table 6. In Burkina Faso and Guatemala, the difference is particularly notable; in the case of Burkina Faso, households spend US$ 8 per capita for health care, and the government spends just US$ 1.90. Unsurprisingly, in all of the countries, richer population groups spend more on health care, measured in absolute terms, than do poorer groups. This pattern is

Table 4. **Percentage of those ill buying or receiving medicine when treated, by quintile**

Country	%, by quintile (poorer to richer)					
	Q1	Q2	Q3	Q4	Q5	Average
Burkina Faso	26	33	31	36	38	33
Kyrgyzstan	8	11	14	10	14	12
Paraguay	50	37	40	31	28	38
South Africa	11	12	10	12	31	17
Thailand (1991)	47	43	41	46	38	43

[h] Overall levels of GNP also include production, which is not reflected in the levels of household consumption that are measured in household surveys.

least evident in Paraguay. The 1986 figures for Thailand (not shown in Table 6) were closer to equality — the first quintile spent US$ 15 annually per capita, compared with US$ 25 for Q5. By 1992 (see Table 6), the difference had grown considerably — Q1 spent US$ 16 per capita and the wealthiest quintile spent US$ 92. In Guatemala and South Africa the ratios between the spending of the richest quintile and the poorest were the most skewed. In both cases this may be the result of the richer groups "opting out" of the care provided by subsidized government providers.

The level of government subsidy to health services and how it is distributed among income groups is likely to influence out-of-pocket spending by the groups. In a separate study related to this work (*10*), it is shown that government-subsidized care in Zambia is consumed more by the richer groups. From this it may be inferred that equal consumption of government-subsidized services across groups in Zambia might make the ratio of rich to poor out-of-pocket spending higher (more progressive).

Fig. 5 shows the distribution of household health spending across the consumption quintiles, dividing up total consumption among the quintiles so that the total comes to 100%. In all countries, there is a clear upward trend: wealthier quintiles account for a far greater percentage of total household spending on health care than do low income households. This trend is particularly marked in Burkina Faso, Guatemala, South Africa, and Zambia. In South Africa, Q5 accounts for 83% of all household health care spending.

Is the distribution of health care spending more unequal than the distribution of overall household income? The answer to this question can be obtained partially by analysing the distribution of health expenditures as a percentage of total household consumption spending. Where the poor devote a higher percentage of their consumption expenditure to health than the rich, such spending would be considered regressive. The opposite situation (where the rich spend a higher percentage on health) would be considered progressive.

Table 5. Annual per capita household consumption, by quintile

Country	By quintile, in US$ (poorer to richer)					
	Q1	Q2	Q3	Q4	Q5	Average
Burkina Faso	34	84	122	219	446	181
Guatemala	154	240	324	455	873	361
Kazakhstan	48	99	140	192	390	172
Kyrgyzstan	54	94	135	211	580	214
Paraguay	489	842	1228	1808	6060	2085
South Africa	211	402	652	1187	4421	1377
Thailand (1992)	368	531	784	1209	2661	1111

Fig. 4. Percentage distribution of consumption around 1995
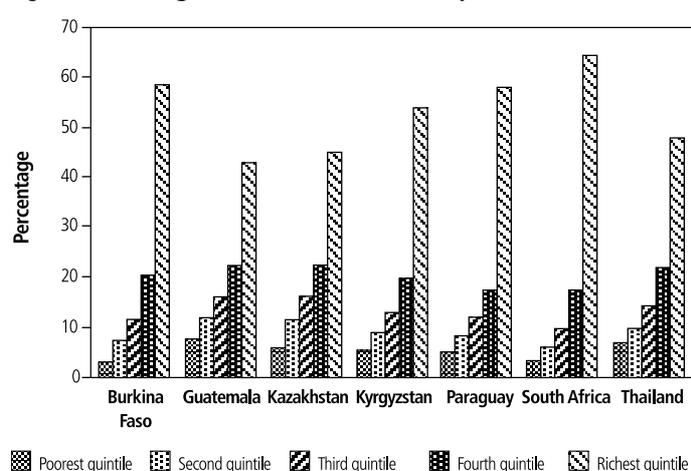
Poorest quintile · Second quintile · Third quintile · Fourth quintile · Richest quintile

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Five of the surveys contain enough information to perform this analysis, as shown in Fig. 6. The results shown should be interpreted cautiously in the light of the earlier discussion concerning the measurement of consumption spending in the studies. While the estimates of household consumption spending are reliable for ranking households, they are less reliable for drawing conclusions about the absolute level of consumption within the countries. The health expenditures are measured with a greater level of precision.

Table 6. Annual per capita household health expenditures, by quintile

Country	By quintile, in US$ (poorer to richer)						Average per capita (US$):	
	Q1	Q2	Q3	Q4	Q5	Ratio Q5/Q1	Household health expenditure	Government health expenditure
Burkina Faso	5	6	6	10	11	2:1	8	2
Guatemala[a]	19	28	63	60	182	10:1	58	12
Paraguay	27	48	57	77	66	2:1	52	42
South Africa	6	10	19	21	280	47:1	68	105
Thailand (1992)	16	19	25	38	92	6:1	38	38
Zambia	3	3	6	9	13	4:1	7	7

Sources: country case studies; *World development report 1995* and *1997*; and *Human development report 1998*.

[a] Curative care only.

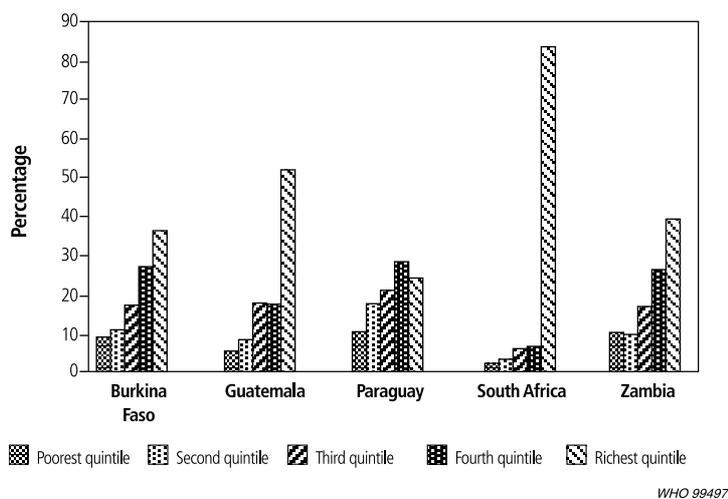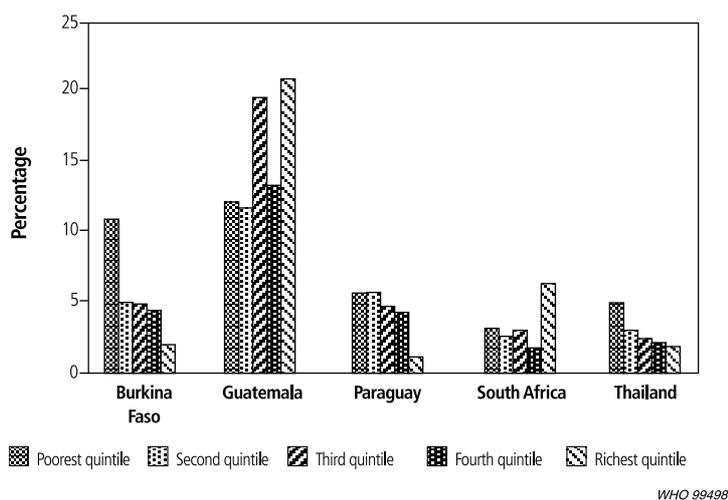Fig. 5. **Percentage distribution of household health spending around 1995**

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Fig. 6. **Health spending as a percentage of total household spending around 1995**

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The results are notable from several perspectives. In Burkina Faso, Paraguay, and Thailand, there is a regressive pattern of spending, with the wealthier quintiles spending less of their total consumption on health care than do the poorer quintiles. However, in Guatemala and South Africa, this finding is reversed — richer groups tend to spend a higher percentage of their consumption on health care than do poorer groups. In these countries health care would appear to be a luxury good, especially for the richest quintile, where these wealthier households allocate a higher percentage of their overall consumption spending to health care.

South Africa is a special case in that the pattern for Q1–Q4 follows conventional wisdom. The highly skewed income distribution concentrates the minority white population in Q5. This population buys privately provided care or insurance cover for private care that is beyond the means, if not outright unavailable, to the other 80% of the population.

In Burkina Faso, Paraguay, and Thailand, health care may well be considered a necessary good (like food and housing) and so takes up a relatively high percentage of poor families' spending. Additionally, there may be a shortage of accessible and inexpensive subsidized health care that would allow poorer households to reduce spending on health without sacrificing access to care.

Conclusions

The results vary greatly in terms of the degree to which they correspond to the investigators' initial expectations. Some results, such as those shown below, were generally in line with expectation.

Wealthier population groups have a higher probability of obtaining health care when they need it. There is an upward trend by quintile in health care use for those reporting illness in all of the applicable countries, with the exception of Kyrgyzstan.

- Wealthier consumption quintiles are more likely to be seen by a doctor than poorer groups.
- Richer groups are more likely to receive medicines when they are ill in all of the countries except Paraguay.
- Richer population groups spend more on health care, measured in absolute terms, than do poorer groups.

Other results were, however, surprising, as the following illustrate.

- There is no clear pattern that richer households are more likely to use the private sector. Only Guatemala and South Africa show a clear pattern of wealthier households being more likely to use privately provided health care.
- There is no clear pattern among the countries concerning the percentage of total reported household consumption spent on health care. In Guatemala and South Africa, richer groups spend a higher percentage of their consumption on health care than do poorer groups. In Burkina Faso, Paraguay, and Thailand, there is a clear trend that the wealthier quintiles spend less of their total consumption on health care than do the poorer quintiles.

Note that these results should be considered tentative, given the difficulties in estimating absolute levels of consumption spending.

Additional implications for policy-makers

These analyses indicate that intuition concerning inequalities in the health sector could result in misguided policy decisions. Findings were in line with expectation in many, but not all, cases. Thus, it is worthwhile to measure the direction and extent of inequality in order to identify problems and to gauge the success of policies designed to address inequalities.

The methods used in this work are relatively simple. Hence the results produced represent a

baseline for comparison and a starting point for additional analyses to explain unexpected results in greater detail. The results thus begin to suggest an agenda of additional work to be done for each country.

From a policy perspective, measuring overall levels of *access* to care — defined as the use of health care by those who need it — is an essential input for health sector policy decision-making. This study found relatively high levels of access in all of the countries except Kyrgyzstan, where the household survey was conducted in a relatively isolated and underserved geographical area.

The distribution of access among different population groups is also critically important. Fig.1 shows that access to health care is unequally distributed to the advantage of the richer in nearly all of the countries studied. Further, richer households are considerably more likely to be seen by doctors when they seek care. Preferential access is not always related to greater use of private providers by relatively wealthy groups. Rather, access for the wealthier groups is related to their higher levels of health expenditures and their use of health services subsidized by government.

The challenge for governments is to find mechanisms to provide high quality health services at relatively low cost to poorer populations, and thus to enable these population groups to attain the same levels of access to health care as those enjoyed by richer groups.

One advantage of the results reported here is that they are readily comprehensible by policy-makers. Each of the country studies uses comparisons among income quintiles. The results may be presented either in tabular format or as graphs that present the information in a visually accessible manner.

Moreover, the studies report findings with interesting implications for health sector policy. The results indicate that one opportunity for policy-makers might be to examine the feasibility of facilitating greater use of private providers by the poor, since use of private providers by the poor is already substantial in some cases. Among other measures, meeting the needs of poorer groups might be achieved by subsidizing demand for privately provided services by the relatively underserved poor

groups. Another possibility is to increase the proportion of publicly financed health services consumed by disadvantaged groups. Potential strategies to achieve this goal include building health facilities and adding health personnel in disadvantaged rural areas and in urban slums.

Implications for further research

As outlined below, several important suggestions for additional research arise from this study.

- The study underlines the importance of conducting research that is comparable within and across countries when possible. This is particularly true for the wording of questions that are easily influenced by cultural interpretation and differences in point of view.
- More sophisticated analytical techniques should be applied to the data. Standardizing the age and sex distributions of the quintiles, the use of concentration curves and indices, and applying other multivariate techniques would be expected to help disentangle some of the findings.
- The type of research reported here can be used to answer a series of important health sector policy questions. In addition to divisions by socio-economic status, it is clearly feasible to perform the same analysis using a male–female division to explore sex differences in health service use and expenditures. Additionally, the analytical methods employed here could quite feasibly be applied, in the format of a pre- and post-test, to measure ex ante the impact of specific policy changes on inequality. ■

Acknowledgements

Résumé

Inégalités de l'utilisation des prestations de santé et des dépenses de santé : données empiriques recueillies dans huit pays en développement ou en transition

Cet article résume les conclusions de huit études conduites dans autant de pays sur les inégalités des allocations de ressources dans le secteur de la santé. Les pays considérés représentent des régions très diverses : Afrique du Sud, Burkina Faso et Zambie pour l'Afrique ; Guatemala et Paraguay pour l'Amérique latine; Thaïlande pour l'Asie ; et Kazakhstan et Kirghizistan pour l'ex-Union soviétique.

On a analysé la distribution socio-économique de l'utilisation des services de santé et des dépenses de santé des ménages à partir des résultats d'enquêtes existantes sur les ménages et à l'aide d'une méthode d'analyse commune à tous les pays. Dans chaque étude, la population a été divisée en quintiles d'après le revenu évalué sur la base des chiffres fournis sur les dépenses de consommation. En Afrique du Sud, en Thaïlande et en Zambie, on a utilisé des échantillons représentatifs de

l'ensemble du pays et ailleurs, des échantillons infranationaux.

Ces études ont consisté à mesurer les écarts simples par rapport à une situation d'égalité pour différents aspects de l'utilisation des services de santé et des dépenses de santé. Les limites des données diponibles n'ont pas permis de chercher à mesurer les inéquités. Les enquêtes ont été conduites indépendamment les unes des autres, à l'aide de questions formulées de diverses manières sur la morbidité et l'utilisation des prestations de santé et sur la base de différentes périodes de référence. En conséquence, aucune comparaison ne serait appropriée et il n'en a pas été fait entre les pays.

D'une manière générale, les groupes de population plus prospères ont davantage de chances de bénéficier de prestations de santé en cas de maladie que les groupes plus pauvres. De fait, des inégalités importantes dans l'accès aux soins ont été relevées dans la quasi-totalité des études. Les populations correspondant aux « quintiles les plus riches » ont davantage de chances de consulter un médecin que les plus pauvres. De même, les plus riches ont, quand ils sont malades, plus de chances de recevoir des médicaments dans tous les pays étudiés, à l'exception du Paraguay. Enfin, les groupes plus riches dépensent davantage, en termes absolus, pour leurs soins de santé.

Toutefois, les études ont donné dans plusieurs cas des résultats inattendus. En particulier, il n'apparaît pas du tout de façon systématique que les ménages les plus prospères ont davantage recours à des services privés. De même, ces ménages ne consacrent pas systématiquement à la santé un pourcentage plus élevé de leurs dépenses de consommation que les ménages plus pauvres. Au Burkina Faso, au Paraguay et en Thaïlande, les quintiles supérieurs consacrent à leurs dépenses de santé une plus faible proportion du total de leurs dépenses de consommation que les plus pauvres.

Les analyses montrent qu'au sujet des inégalités dans le secteur de la santé, l'intuition pourrait conduire à des décisions politiques erronées. Les constatations n'étant pas toujours conformes aux attentes, il paraît utile de mesurer le sens et l'étendue des inégalités pour que puissent être prises des décisions éclairées.

Un exemple de résultat inattendu est que le secteur privé assure une part importante des prestations de santé dont bénéficent les groupes de population les moins prospères dans trois des pays étudiés. En Afrique du Sud, au Guatemala et au Paraguay, plus de 37 % des personnes classées dans le quintile correspondant aux dépenses de consommation les plus faibles ont recours à des dispensateurs privés. Il pourrait donc être intéressant de déterminer si ces derniers pourraient être utilisés dans ces pays et d'autres pays semblables – et de quelle façon – pour améliorer l'accès des plus pauvres aux prestations de santé et réduire ainsi les inégalités. Peut-être pourrait-on développer et réguler au mieux le secteur public. Une autre solution serait de subventionner la demande de prestations privées en faveur des plus défavorisés. Une autre solution serait d'accroître la proportion des services financés par le secteur public.

Il ressort de ces études qu'il serait souhaitable de conduire de nouvelles recherches en utilisant les mêmes méthodes de collecte et d'analyse des données afin de pouvoir faire des comparaisons interpays. Il conviendrait également d'appliquer des techniques d'analyse plus sophistiquées pour standardiser les quintiles du revenu sur l'âge et sur le sexe et de s'appuyer sur l'analyse multivariée pour répondre aux questions soulevées par les résultats inattendus observés. Les méthodes simples qui ont été utilisées ici ou les techniques plus sophistiquées suggérées pourraient être utilement mises à profit pour mesurer l'impact de modifications précises des politiques de santé sur les inégalités.

Resumen

Desigualdades en el uso de los servicios de atención de salud y en el gasto sanitario: datos empíricos de ocho países en desarrollo y en transición

En este documento se resumen las conclusiones de ocho estudios específicos de país sobre las desigualdades en la distribución de los recursos sanitarios. Los países son representativos de una amplia variedad de regiones: Burkina Faso, Sudáfrica y Zambia en África; Guatemala y el Paraguay en América Latina; Tailandia en Asia; y Kazajstán y Kirguistán en la antigua Unión Soviética.

Se examinan la distribución socioeconómica del uso de los servicios de salud y de los gastos sanitarios familiares a partir de los datos aportados por las encuestas de hogares, aplicando una metodología común de análisis en todos los países. En cada estudio se divide a la población según los quintiles de ingresos, determinados a partir del gasto en consumo notificado. En los trabajos sobre Sudáfrica, Tailandia y Zambia se utilizan muestras representativas del país, mientras que en el caso de los otros países se han utilizado muestras subnacionales.

Se han hecho mediciones de las desviaciones simples respecto a la igualdad en diversos aspectos del uso de los servicios de salud y el gasto correspondiente. Debido a algunas limitaciones de los datos, no se han podido medir las inequidades. Las encuestas se llevaron a cabo independientemente unas de otras, formulando de diferentes maneras las preguntas sobre las enfermedades y el uso de los servicios y empleando distintos periodos de rememoración. Por consiguiente, no procede hacer ninguna comparación entre los países.

En general, los grupos de población más ricos tienen una mayor probabilidad de conseguir atención sanitaria en caso de enfermedad que los más pobres. En realidad, en casi todos los países analizados se observan altos niveles de desigualdad en el acceso a la atención de salud. Los quintiles más ricos tienen más probabilidades de ver a un médico que los grupos más pobres. Análogamente, en todos los países estudiados, salvo en

el Paraguay, los más ricos tienen más probabilidades de recibir medicinas cuando enferman. Los grupos más ricos también gastan más en términos absolutos en atención sanitaria.

En varios casos, sin embargo, el estudio ha aportado resultados inesperados. En particular, no hay ningún indicio consistente de que los hogares más ricos recurran más a menudo a la asistencia privada. En comparación con los hogares más pobres, las familias acomodadas no dedican sistemáticamente un mayor porcentaje de sus gastos de consumo a la atención de salud. En Burkina Faso, el Paraguay y Tailandia, los quintiles superiores gastan en asistencia sanitaria una proporción más pequeña de su consumo total que los más pobres.

Los análisis efectuados indican que, en lo tocante a las desigualdades en salud, la intuición puede dar lugar a decisiones de política desacertadas. Como los resultados no siempre coinciden con las ideas previamente formadas sobre las desigualdades, parece que convendría medir la magnitud y las tendencias de éstas para informar la formulación de políticas.

Un dato inesperado, por ejemplo, es que el sector privado constituye un importante proveedor de atención de salud para los grupos de población más pobres en tres de los países estudiados. Proveedores privados atendie-

ron a más del 37% de los individuos en el quintil de consumo más pobre que solicitó asistencia en Guatemala, el Paraguay y Sudáfrica. Por lo tanto, sería interesante estudiar si en estos y otros países similares se podría utilizar, y de qué manera, a los proveedores privados para aumentar el acceso de los pobres a la atención de salud y reducir las desigualdades en ese sentido. Ello entrañaría probablemente la adopción de medidas que asegurasen la promoción y reglamentación del sector público, así como de sistemas de subvención de la demanda para las personas con menor poder adquisitivo.

Estos análisis muestran que es necesario llevar a cabo nuevas investigaciones con una metodología común para recopilar y analizar datos que faciliten las comparaciones interpaíses. Convendría también emplear técnicas analíticas más perfeccionadas a fin de normalizar las distribuciones por edad y sexo de los ingresos y de articular una respuesta multifactorial a algunas de las preguntas planteadas por los datos inesperados obtenidos. Los métodos sencillos aquí utilizados, o los más complejos que se han sugerido, podrían ser de utilidad para medir la repercusión en las desigualdades de cambios específicos de las políticas de salud.

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