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Romania

Functional Review

HEALTH SECTOR

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Acronyms

A&E	Under-Secretary of State
A-DRG	Australian Diagnosis-related Group
AID/IMAS	Promoting Integrity in the Health Sector Association for Implementing Democracy
AIDS	Acquired Immune Deficiency Syndrome
ANAF	National Revenue Collection Agency
ANMDM	National Medicines Agency
BGD	Budget General Directorate
CADREAC	Drug Regulatory Authorities in EU Associated
CASAOPSNAJ	Social Health Insurance House of the Defense, Internal Affairs, and Justice Ministries
CASMTCS	Health Insurance House of the Ministry of Transport, Construction, and Tourism
CH	City Hall
CT	Computed Tomography
CoPh	College of Physicians
DC	District Council
DHIH	District Health Insurance House
DPHA	District Public Health Authorities
DRG	Diagnosis-related Group
EMN	European Migration Network
EU	European Union
EU-12	EU members since 2004 or 2007 (Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia, Malta, and Cyprus)
EU-15	EU members before May 2004 (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and the United Kingdom)
FFS	Fee for service
GDP	Gross domestic product
GFATM	Global Fund to Fight HIV/AIDS, Tuberculosis, and Malaria
GMC	UK General Medical Council
GNP	Gross national product
GP	General practitioners (primary care doctors)
GoR	Government of Romania
HBS	Household Budget Survey
HIH	Health Insurance House
HIV	Human immunodeficiency virus
HNP	Health, nutrition, and population
HPV	Human papillomavirus
HR	Human resources
IMF	International Monetary Fund
INPSAS	International Public Sector Accounting Standards
ISO	International Organization for Standardization
IT	Information technology
LAPA	Local Authorities for Public Administration
MDs	Medical doctors
MoPF	Ministry of Public Finance
MoH	Ministry of Health

NCHA	National Commission for Hospital Accreditation
NGOs	Non-governmental Organization
NHI	National Health Institute
NHIF	National Health Insurance Fund
NHIH	National Health Insurance House
NPTC	National Program for TB Control
OECD	Organisation for Economic Cooperation and Development
PCGNP	Per capita gross national product
PHC	Primary health care
PIAMGD	Institutions Accounting Methodology General Directorate ()
PPP	Purchasing parity per capita
PPU	Public Policies Unit
QUOF	Quality and Outcomes Framework
SDR	Standardized Death Rate
SIUI	NHIH Information System
TB	Tuberculosis
TQM	Total Quality Management
UK	United Kingdom
UN	United Nations
US	United States
USAID	United States Agency for International Development
WHO	World Health Organization
WHO-HFADB	European Health for All Database

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EXECUTIVE SUMMARY

Abstract: This Functional Review was carried by a Bank team upon request by the Government of Romania. As a starting point, it shows that: (i) health outcomes in Romania lag behind those of the EU; (ii) users are not satisfied with its lack of responsiveness – long lines, informal payments, discourteous handling of patients, poor cleanliness, lack of maintenance, and breach of safety measures; (iii) the poor and other vulnerable groups (for example Roma communities) suffer from a significant lack of access to services; and (iv) the fiscal contraction of 2008-2010 exposed the weakness of financial controls in the health sector. The Review examines four health functions in depth: service delivery, financing, stewardship and resources (including pharmaceuticals). Based on our findings, we present recommendations categorized by the three set of challenges that the sector is facing: (i) improving governance and management; (ii) streamlining the health service network and re-launching quality control systems; and (iii) increasing preventive services and equity. For any expansion of the sector to be sustainable, a number of pre-requisites will need to be in place, including a private sector development strategy, stronger fiscal controls, a system of health technology assessment, and stronger management in key agencies.

This executive summary examines the performance of the Romanian health sector, describes the "machinery" that operates the system, and explores whether the sector is underfinanced. It concludes by discussing the main weaknesses in the operation of the machinery and by suggesting options for improvement.

I. The Performance of the Health Sector

The performance of the Romanian health sector can be measured in terms of four different dimensions: (i) health outcomes; (ii) its responsiveness to users; (iii) equity and financial protection; and (iv) its financial sustainability. The Functional Review found significant problems in each of these areas.

Health Outcomes

How good is the health status of the population of Romania? The answer to this question depends on the point of comparison. As Romania has recently joined the European Union (EU), it is relevant to compare Romania with the other EU countries. However, it is also important to bear in mind that Romania (with a per capita income in 2009 of US$7,500) is significantly less rich than the average EU country (with a per capita income in the same year of US$32,845) and that a country's level of income is correlated with the health status of its population. This study has found that – while health outcomes are improving and while the gap between Romania and the EU is being reduced in some key indicators Romania's health outcomes remain significantly behind those of its fellow EU member states.[1] Specifically:

- Over the past three decades, life expectancy in Romania has been growing, reaching 69.9 years for males and 77.5 years for females. There have also been huge reductions in the probability of dying before age 5 (reaching as low as 12 per 1,000 live births) and in the maternal mortality (now 21.1 maternal deaths per 100,000 live births). In these summary indicators, Romania is narrowing the historically large but still

[1] It also finds that most health indicators are around the average for countries with similar income level.

significant gap between itself and the EU country average, but its life expectancy remains significantly behind the EU's average life expectancy of 76.5 years in males and 82.6 years in females.

- Heart disease is the number one cause of death in Romania, meaning that success in cardiac interventions is an important indicator of the success of the health system as a whole. The report has found that this is an area in which Romania has been relatively successful. The Romanian standardized death rate from heart disease for both genders (194 per 100,000 inhabitants) is well below that of countries with similar income levels (330 per 100,000 inhabitants), although the country is making only limited progress in matching the cardiac outcomes of EU countries.

- In other areas such as prevention, Romania does not compare favorably with its peers. A dramatic example is provided by cervical cancer mortality, which can be avoided to a large extent by screening and treating screening-detected cervical lesions. There is a high burden of cervical cancer in Romania. Even more worryingly, mortality rates from the disease are rising or remain stable, whereas in most other European countries they are decreasing.

Responsiveness to Users

Problems in this area tend to be those that appear most often in newspapers, including long lines and dissatisfied patients unable to get the diagnostic services or medicines that they needed. Users often complaint of suffering indignities in their dealings with the health sector – there is little choice in the system and providers often fail to make an effort to be attractive or welcoming to users (hence problems of cleanliness or lack of maintenance).[2] The persistence of informal payments is a problem not only because of their cost to users but because they reflect a lack of concern for patients' rights and the freedom for providers to decide what quality of service to provide to the patients. Surveys suggest that informal payments are widely charged for hospital services in particular; over 60 percent of hospital patients make informal payments to their doctors. "Responsiveness" to patients' rights is difficult to measure and benchmark, but one such attempt by the "Euro Health Consumer Index 2009" ranked Romania 32nd out of 33 European countries in this respect.

Equity and Financial Protection

How equitable is the health care system? The most recent data available are from the Household Budget Survey (HBS) of 2008. Several conclusions can be drawn from the HBS data:

- There is a big problem of access to health care, especially for the poor. Many poor individuals who are in need of health services do not seek care. This is the case for almost half of the poorest 20 percent of the population. This gap is particularly large in the treatment of chronic disease as 42 percent of the poor who declare themselves

[2] The private provision sector is tiny. Only 3 percent of consultations (or 6 percent of the richest fifth of families) take place in a private office/clinic.

to have a chronic condition do not seek care compared with 17 percent of the rich. The real gap is even larger as many of the poor with chronic conditions are not aware of their need for care. Simulations that assume that the need for care among people with chronic conditions is similar among rich and poor estimate that a whopping 85 percent of the poor who need medical care are not getting it.

- The years of economic growth increased the access of the whole population from 61 percent in 1996 to 71 percent in 2008. In this period, however, all of the increase in access was concentrated among the richer income groups. The access of the top income quintile increased from 65 percent to 80 percent, whereas there was no increase in the access of the poorest quintile.

- The government policy is to subsidize services (so in theory there are no copayments for services) and to partially subsidize a very large variety of pharmaceuticals for the whole population. In addition, the poor are explicitly exempt from payments, but the available evidence suggests that this policy is not effective in protecting the poor and other vulnerable groups from financial hardship.

    - Three out of four poor patients do pay for their care.

    - Sixty-two percent of the poor who are in need of medicine pay for medicine.

    - The average rate of reimbursement for the poor is the same as for all other income groups, which means that, because the use of health services is higher among higher-income groups, most of the subsidy benefits the middle class and the rich.

- While in some countries illness leads to poverty because of the high out-of-pocket financial costs of medical care, in Romania the main problem is a lack of access rather than high financial costs. A study based on survey data for 1999 to 2004 measured the impact of health care payments on poverty. In 1999 health care payments pushed 1.2 percent of the population below the poverty line, while in 2004 they pushed 0.4 percent of the population below the line.

Financial Sustainability

Between 2005 and 2008, public health sector revenues increased rapidly by an annual average nominal rate of 23 percent per year, a faster rate than total public revenues. The funding needs of the health sector were growing at an even faster rate due to a number of factors, including the increase in the numbers of drugs eligible for subsidy and the removal of ceilings on reimbursed medicines. When the financial crisis of 2008 forced the government to contract public spending, the health sector was unable to control its spending and instead accumulated debt to drug and other suppliers. The National Health Insurance House (NHIH) went from running a small surplus in 2006 and 2007 to running large deficits in 2008 and 2009. The NHIH reserves were insufficient to cover the entire deficit, and by mid-2010 the NHIH had accumulated very large debts (mostly to medicine suppliers). Congress approved a

special transfer to pay this debt, but once this was paid, creditors appeared with additional claims. Auditors later found that hospitals and pharmacies had sold products and services, but bills had not been accounted for by the county insurance houses because they would have exceeded the approved ceilings allowed in the budgets.

II. Description of the Health System

After the 1989 revolution, Romania initiated a reform of its centralized, tax-based system. Changes introduced during the first decade after the revolution were consolidated and deepened by the Health Insurance Law of 1997 and by the Health Reform Law of 2006. The thrust of the reform has been to create a decentralized and pluralistic social health insurance system in which citizens would make contributions based on their income to health insurance funds that would purchase services from health providers in a market where quality and safety would be carefully regulated by an independent entity. While substantial progress has been achieved in moving the system towards this vision, many features of the old system persist, and some capacities vital to enable the new system to function effectively have not been created.

In theory, the main responsibility of the Ministry of Health is to develop national health policies, regulate the health sector, set organizational and functional standards, and improve public health. In practice, the central ministry and its 42 district-level offices have remained in charge of the operation of the public hospitals and are heavily involved in the financing of high-tech activities in the sector through abnormally large "national health programs." These responsibilities have distracted the Ministry of Health (MoH) from the need to develop its capacity in the areas of policy and regulation, and, as a result, the policy unit is barely staffed and quality regulation is almost non-existent. During 2010, the MoH re-launched the reform process by decentralizing responsibility for the management of lower-level hospitals (360 of the 432 public hospitals) to the local authorities. This is an important step that will relieve the ministry of the burden of managing the smaller facilities, but it will continue its role in the provision of services as it continues to be in charge of the larger hospitals and of the high-tech national health programs.

The network of provision is heavily biased towards inpatient hospital care. The legacy from the communist period included a large number of hospitals and hospital beds operating in a fragmented structure and with insufficient development of different levels of care. Romania has a high inpatient admission rate. While the government's stated policy during the last decade has been to reduce its reliance on hospital services and increase the use of primary care doctors and outpatient services, little progress has been achieved to date in making this change. While the number of hospital acute beds has been reduced, Romania still has more than 5 per 1,000 population compared with 4 per 1,000 population in the EU. Primary health care services are provided by approximately 10,000 family doctors who operate as independent practitioners. In 2010, hospitals consumed over 50 percent of the public budget for health, while primary care received less than 7 percent (having reached a maximum of 9

percent in 2008). In 2010, a National Strategy for Hospital Rationalization was issued and its implementation initiated.

The health insurance system is administered by the National Health Insurance House (NHIH), a central quasi-autonomous body with 42 district health insurance offices, responsible for contracting services from the health providers. Until 2003, the district health insurance offices were responsible for collecting health insurance contributions from employers and employees in their district. Since January 1st, 2004, the contributions have been collected at the national level by a special body within the Ministry of Finance, and the district health insurance offices are only in charge of collecting contributions from the self-employed. Every year, the MoH and the NHIH prepare a National Framework Contract Law and its regulations that lay out the entitlements of the insured population to health services, to pharmaceuticals, and to medical devices and that establish rules concerning payment systems and quality reviews.

While almost the entire Romanian population of 22 million is entitled to benefits, an estimated 11 million are not making social health insurance contributions, either because they are formally exempt from payment (including pensioners, the unemployed, prisoners, military personnel, people on sickness or maternity leave, and students) or because they operate in the informal sector and do not contribute. For those who are formally employed, the overall insurance contribution rate, taking employers and employees together, is currently 10.7 percent of a contributor's salary. This was reduced from 14 percent in 2008 and by European standards is now relatively low. In 2010, legislation was passed that extended contributions to about 3.5 million additional people, including pensioners earning over a certain threshold. Local councils are also now expected to contribute to the financing of the hospitals under their management. A copayment law is being debated in Parliament and is expected to start being implemented in 2011. A significant part of the health budget is financed by taxes on cigarettes and alcohol and by general taxes, including, in 2010, the national health programs and the payment of debts to pharmaceutical firms and other providers.

III. Is Health Underfinanced in Romania?

Most comparisons suggest that Romania spends less than comparable countries on health. According to official figures, Romania spends a little less than 5 percent of its GDP on health, compared with a European average of 6.5 percent and an EU average of 8.7 percent. Part of the difference arises from Romania's relatively low public expenditures in health and part of the difference arises from low private expenditures. Official statistics for private expenditures show that only 18 percent of health expenditures are private in Romania, which is very low compared with Bulgaria (41 percent), Poland (28 percent), and other neighboring countries. It is likely that these figures for Romania underestimate the magnitude of informal payments, but even if higher estimates for private expenditures are used, private expenditures remain comparatively small. A long term strategy is needed for the health sector; it should

combine a measured increase in public financing for the sector with a strong impulse to increase private financing. The strategy should also include measures to increase the efficiency of the health sector as well as compensatory measures for the poor.

Policymakers face an impasse that makes it difficult to agree on such a long-term strategy. Part of the problem lies on the widely different perceptions that exist about the source of the problems and part lies with the weakness of institutions and capacities that would be required to implement such a strategy. Two different views coexist among policymakers in Romania concerning the problems of financing in the health sector. The two views derive from different diagnostics about the evolution of health financing in recent years and have resulted in a lack of trust and dialogue between the two groups. The first view – held by the finance authorities—is that the health sector has no control over its spending. Public expenditures have significantly expanded in recent years, yet when the financial crisis hit Romania it was very difficult to cut expenditures in the health sector because it had incurred significant hidden spending that had turned into arrears and had to be covered by the Ministry of Finance. According to this view, the health sector refuses to recognize financial limits consistent with the limitations of government finances.

The second view – favored by officials from the health sector – is that the sector has suffered from the arbitrary changing of rules by the financial authorities. The proponents of this view claim that the post-communist reform of the health sector created a system of social health insurance financed by a hypothecated payroll tax, approved by parliament independently from the rest of the public budget, that was intended to be a permanent income source for the sector. Yet, the percentage of the payroll tax assigned to the health sector was cut significantly during the years of economic expansion and has not been restored to its previous level during the economic downturn, resulting in a drop in the share of total government spending allocated to the health sector. Furthermore, revenue collection, which in the past was done by the NHIH, is now done by an agency of the Ministry of Public Finance. A new automatic mechanism, in place since February 2011, allows the health sector to obtain information about contributions independently from the ANAF, which increases the accountability of the collection system. Health sector officials also claim that decisions taken outside the health sector (involving the elimination of caps on ambulatory drugs and a steep increase in wages) in the run-up to the latest elections in 2008 constituted a mandated increase in expenditures and were not accompanied by a corresponding increase in the health sector's budget.

Because of the opposing views about the source of the problem, little progress has been achieved in developing a long-term strategy for the sector. Health sector officials are permanently hoping that "next year" they will receive a large budget increase and refuse to focus on developing a strategy for increasing the private sector's involvement in health. Meanwhile, the financial authorities are unwilling to contemplate increasing the sector's public budget until controls are strengthened and inefficiencies reduced. Because of the continued disagreement over this, no strategy has emerged to develop a private sector in health, and a large part of the growth in private financing has been in informal payments,

which create inefficiencies and inequities as they cannot be regulated or financed by private insurance and no compensatory measures are taken in favor of the poor.[3]

IV. The Main Challenges Facing the Sector

Any long-term strategy for the sector would need to respond to three sets of challenges: a) the need to improve governance and management, b) the need to streamline the service network and develop quality assurance systems, and c) the need to strengthen preventive services and increase equity in the system. Each of these challenges is discussed below with a few possible options for reform. Chapter 6 (starting on page 108) includes a more detailed matrix of findings and recommendations in each of these three sets of challenges with objectives, sequenced actions, links to health functions, priorities, implementation periods, assignment of responsibilities, output indicators, outcomes, and levels of financial resources.

A. Improve Governance and Management

Two sets of issues are included in this section: policy formulation and accountability and strengthening financial controls in health.

Policy Formulation and Accountability

Romania has already set out regulations to establish a modern policymaking process. Government Decision 775/2005 regulated the formulation and monitoring of public policies, Government Decision 1361/2006 covered the preparation of substantiation notes, and the Ministry of Health develops a Strategic Plan every two years. Despite these formal steps, we found shortfalls in the process of strategic planning. For example, the content of the Strategic Plan corresponds more to a business plan than a proper policy and strategy document. Also, we found that the process by which the 2011-2013 Health Strategic Plan was formulated was a one-way top-down channel developed by the Public Policies Unit (PPU) in the MoH under the direction of the Secretary General. The process was not used to encourage the exchange of ideas, and the documentation seems to be mostly written to fulfill budget-planning requirements. Neither the NHIH nor any other major stakeholder seems to have contributed to making these decisions, and what little data exist have not been sufficiently used in negotiating the National Framework Contract. No unit, department, or directorate within the MoH is responsible for health data analysis. The 30-strong analytical unit at the NHIH is mostly dedicated to checking the quality of financial information submitted by health care providers. In this review, we make a number of recommendations to improve the quality of

[3] A partial exception to this may be the Law on Copayments that was recently submitted to Congress. While this is widely seen as a step in the right direction, it is also seen as having missed the opportunity to improve incentives for providers, to reduce high-cost interventions, and develop a complementary private insurance system.

policy formulation, including an open and inclusive policymaking process. While choosing the general direction for the sector is a key role played by the Minister of Health, its vision has to be openly and transparently communicated to citizens and other health stakeholders if it is to be successful. This can be done by: (i) making health priorities known to everybody through a proper policy document that is widely circulated among all health actors and the public and by setting up a Health Council/Commission to build consensus and implement proper policy proposals; (ii) reducing *ad hoc*, last minute legislation (emergency ordinances) as these often prevent health stakeholders from being able to contribute to policymaking; (iii) developing a proper communications strategy in the MoH that explains its vision and reform goals; and (iv) strengthening key departments in the MoH, particularly, the PPU, with sufficient numbers of staff with the right mix of skills in order to increase its policy and delivery capacity.

Following the recent decentralization of hospitals, accountability relationships in the Romanian health system have become more complex. Managers of these hospitals must now report to their district councils and city halls, to the MoH, and to the NHIH. The local authorities report to the Ministry of Interior and not to the MoH on the performance of the services that they manage. Hospital managers sign a contract with their district council or city hall according to which they may be removed if they fail to deliver their stated objectives. However, the local authorities have only limited capacity to hold hospitals to account. In addition, the legal framework that regulates the assignment of responsibilities to local governments is not very structured or integrated at the moment. The second layer of accountability for primary care, ambulatory, and hospital centers is to the MoH through district public health authorities. We found this relationship to be extremely weak. It will be crucial for the government to clarify, strengthen, or reassign accountabilities across the board, thereby increasing transparency. This clarification should reestablish the MoH's policy leadership role (as opposed to its administrative role) and should guarantee the autonomy of the NHIH in its health purchaser role (as opposed to its role simply as a payer), but promoting greater clarity about the NHIH accountability and more transparency across the board (by publishing its annual reports, auditing memos, and technical documents to strengthen its independent regulatory).

Strengthening Financial Controls

The evolution of health expenditures over recent years has demonstrated that, without careful control, expenditures can grow in an explosive way. In the short run, the challenge is to strengthen financial controls. Over the long run, the challenge is to develop systems capable of setting priorities for the use of new technologies and pharmaceuticals in ways consistent with available financing.

In 2009 and 2010, there was significant spending in the sector that exceeded the approved budget, mostly on pharmaceuticals and hospital services. Very significant arrears accrued, and for several months the full extent of the problem was unknown. Since then, the government, with the support of the IMF and the EU, has developed a number of measures to exercise more effective control over expenditures in health. In recent months, these have

included limiting the number of contracted hospital inpatients to 10 percent less than the 2010 level and reducing the price markup paid by the government for drugs in the national health programs. The government is also implementing an ambitious information technology system in the NHIH to monitor and increase the efficiency of health spending. Additional controls will be implemented in the near future, including: (i) providing indicative caps for quarterly services contracted with hospitals and physicians with incentives for physicians to remain within these prescribing ceilings; and (ii) reducing the number of compensated and free drugs approved in 2008 with a view to, wherever possible, moving towards generics.

An unusual feature of the Romanian health sector is the existence of massive National Health Programs. These programs have grown at a much faster rate than any other item in the health budget, a budget equivalent to almost one-fifth of total health expenditures and 2.3 times larger than the total budget for primary care. Three groups of programs are brought together in the National Health Programs. The first group consists of the preventive and promotional programs, which account for a very small proportion of the total financing. The second group consists of programs to combat communicable diseases, including HIV/AIDS and TB, which jointly account for about 10 percent of the budget of the National Programs. In many Eastern European countries these two groups of programs are centralized and are a high priority within the Ministries of Health. In Romania, there is a third group of programs that consists of high-cost, low-frequency conditions and treatments, and these now constitute the lion's share of the National Programs. These include cancer (31 percent of the total budget of the National Programs), diabetes mellitus (13 percent), organ and tissue transplants (2 percent), and kidney dialysis (23 percent). These programs are financed by the MoH and the NHIH and receive special treatment. Not only are they given a high budget priority but also they were exempted from cuts during the financial crunch of 2009. They are also exempt from rules requiring copayment by users and from the practice of favoring generics, and they tend to involve new high-cost technologies without a proper health technology assessment. In this functional review, we recommend first streamlining the national health programs to emphasize the prevention of NCDs and cervical cancer and the control of infectious diseases, while, second, turning the other national health programs that are currently financing high-cost, low-frequency interventions into a special catastrophic diseases fund with a clear budget ceiling and transparent rules for decision-making.

Financial controls must also be brought to bear on pharmaceutical expenditure, which is increasing faster than economic growth and faster than expenditure in the rest of the health system. As a result, containing costs and achieving value for money are ongoing challenges. In terms of cost containment, new technologies need to be subject to greater scrutiny, including the use of health economic assessments, mandatory budget impact assessments, and a transparent system of governance. Here, we propose: (i) developing and implementing an integrated national medicines policy; (ii) reviewing the current reimbursement list to delete items for which there is little evidence of effectiveness and cost-effectiveness and ensuring that medicines included in disease-specific subgroups are effective and cost-effective and have appropriate registered indications; (iii) introducing health technology assessments (HTA) as a prerequisite for drugs being included in the reimbursement list; (iv) introducing

mandatory budget impact assessments and use of risk-sharing arrangements (RSAs) for all new medicines with anticipated high cost or high usage; (v) introducing consumer awareness campaigns regarding the safety and quality of generic medicines, the actual costs of medicines, and the opportunities for consumers to save money at the pharmacy by choosing generics; (vi) introducing flat copayments to increase affordability, certainty, and equity; and (vii) introducing indicative individual prescribing budgets, while monitoring doctors' prescribing behavior and giving feedback to prescribers.

B. Streamline the Health Service Network and Re-launch Quality Control Systems

Romania inherited a large, obsolete, and distorted hospital sector, very few outpatient facilities, and a weak system of quality regulation from the old communist system. While some progress has been made in modernizing the network, there is still much that needs to be done as professional and financial incentives have continued to direct investments and human resources towards the provision of inpatient services.

Streamlining the network would involve re-shaping the existing institutions – which operate independently from each other – into networks capable of functioning within a system of referrals and counter-referrals. This would require classifying existing health service delivery facilities by levels and types and identifying tertiary-level centers that could become the heads of each referral network. It would also require reducing unnecessary inpatient health facilities, reshaping mono-profile hospitals, and reducing acute beds to a maximum of four per 1,000 inhabitants. As the supply of inpatient services is reduced, there will be a need to increase the supply of specialized ambulatory and day care services (these could function within hospitals, as satellite clinics, or independent facilities). Some of these actions may require adjusting, as needed, the existing EU-funded investment program for hospital rehabilitation and medical equipment.

The current payment systems create financial incentives that are contrary to the government's stated policy of reducing the use of inpatient services and increasing the use of primary and specialized ambulatory services. Some examples include:

- Many primary care doctors are working only a few hours per day and could increase their volume of services substantially. This is partly due to the relatively small fraction of their income that is paid through fees for service, but mostly due to the normative cap on the number of patient visits for which they can charge per day. There are already plans to raise the fee for the service component of doctors' incomes from 30 percent to 50 percent, but unless the normative cap is also eliminated, they will not be able to respond to these incentives.

- Similarly, ambulatory specialists are reported to be highly under-used. This again is due to a cap on the number of points that they can earn per day of work and the lack of incentives for delivering ambulatory procedures.

- Doctors have no incentive to limit referrals as they can charge for each referral, they face no penalty for making excessive referrals, and they have no incentives to provide a wider range of services themselves than they do already.

- Doctors have no incentives to limit their prescribing practices to medical need or to favor generic or cheaper medicines.[4]

- Hospitals are paid based on the diagnosis-related group system (DRG) for inpatient services, which gives them an incentive to increase inpatient admissions. In 2006, 9 of the 20 most frequently observed DRGs were those that, in other countries, are treated routinely as ambulatory or day care services. These patients account for 15 percent of inpatients in Romania and could easily be treated in outpatient settings.[5]

- DRGs were supposed to foster competition, yet the NHIH claims it is forced to contract with all hospitals, regardless of cost or quality.[6]

- The technical building blocks for setting up positive incentives within the payments system are, to a large extent, already in place. Fees for service linked to capitation can achieve a balance between different levels of provision and ensure access for the whole population. DRG payments, if appropriately structured, can encourage the provision of ambulatory and day care instead of inpatient treatment. Changing the rules so that the NHIH no longer pays for readmissions, which is a proposal in the current framework contract, is a good example of such a refinement. Quality indicators can be added to refine these payments. There are many easily adaptable examples in other European countries. However, the constraints in the current framework contract that, in effect, limit the volume of activities of primary and outpatient specialists and the quarterly recalculation of points values might offset any potential benefits from adjusting the payment tariffs themselves.

In this regard, in this review, we suggest that the government: introduce incentives to strengthen and develop individual-based primary and secondary prevention and promotion services; to introduce incentives for patients to use ambulatory and day care services; and to eliminate all mandatory contracting, removing DRG adjustments by hospital and limiting services payments to the services that the hospitals should provide based on the to hospital classification (level within the network). We also support the implementation of a financial mechanism to pay for services provided through the referral network (letting the money follow the patients).

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[4] There are now plans to set an indicative ceiling to the value of prescriptions per prescriber and to develop financial incentives to encourage doctors to remain within those ceilings

[5] Some observers of the Romanian health system have criticized the use of "Australian weights" in the DRG system used in Romania. While we agree that this is a problem, we think this is a minor inconvenience compared with the much more serious problems discussed above. Our advice would be simply to make small incremental corrections to the existing weights that will not require extensive technical assistance.

[6] There are now plans to allow the NHIH to contract selectively with hospitals

The Functional Review found that the system of quality regulation is weak. The National Commission for Hospital Accreditation (NCHA) currently operates as an independent agency under the aegis of the office of the Prime Minister. While the NCHA currently has a very large set of references, standards, criteria and indicators, the current design seems to be closer to an expanded licensing system. . The NCHA needs to develop protocols for carrying out regular performance appraisals (outcomes-focused quality assessments) in all levels of care (PHC, ambulatory centers, and hospitals). Also, in the new context of decentralization, it may be useful to review its autonomy and to speed up its activities. In parallel, the government could design performance appraisal protocols by levels of care (PHC, ambulatory centers, and hospitals) in accordance with the new service delivery maps, define and implement a technical audit scheme including incentives and penalties, and implement a formal mechanism to ensure that patients' voices on the issue of the quality of care are being heard.

Another key component of quality in the health system is the use of international clinical guidelines, which are algorithms that provide practitioners with guidance regarding diagnosis, management, and treatment in specific areas of health care. Each country needs to adapt these clinical guidelines to fit the context of its own health system, referral networks, and resources. The guidelines create what are known as care pathways, which provide detailed guidance for managing patients suffering from specific conditions over a given time period, including details of their progress and outcomes. In this way care pathways aim to improve the quality, equity, continuity, and co-ordination of care across the health system. We suggest that the government establish evidence-based Romania-specific protocols and implement a new procedure to create and update Romania's clinical guidelines by level of care. In addition, these Romanian protocols could be used to reform or establish the basic package of personal services so that it emphasizes not a positive list of diseases but rather equity and ease of access and use of "care pathways."

C. Increase Preventive Services and Equity

As already indicated, Romania has a significant problem of poverty and equity. Among the EU countries, it ranked second in 2008 in terms of the proportion of the population at risk of poverty with 23 percent, just below Latvia with 26 percent (Eurostat).[7] Given this extensive inequality, it would be desirable for the government to develop specific policies to ensure that the poor have access to health care. In theory, Romania provides such protection by exempting those registered in the minimum income program from paying contributions and copayments. However, in practice this mechanism is insufficient as our analysis above has shown that the poor face significant problems in accessing health care, possibly because they cannot afford to make informal payments to providers. Data show that having a low income is a greater determinant of lack of access than living in a rural area. Our analysis also suggests that much of the subsidy provided by the government benefits the richer segments of the population who could probably afford private insurance so the government would do

[7] This measures the proportion of the population earning less than 60 percent of the national median income per equivalent adult.

well to consider ways to improve the targeting of its subsidies. The current legal exemptions are not effective given the need to increase incentives for providers and the existence of large informal payments (which are currently the *de facto* incentive for providers). The government can consider introducing explicit mechanisms (such as vouchers) that link its payments to health providers for the provision of effective services to the poor. In addition, the government should give careful thought to increasing private financing over the long term, including the development of private insurance for those who can afford it. We are also suggesting that the government review the legislation about what is and is not allowed in relation to informal co-payments, implement communications campaigns regarding the population's rights, co-payments, and what kind of payments are not allowed, and conduct audits and investigations.

Experience in other countries where the poor have limited access to health services suggests that expanding primary care can rapidly and substantially benefit the poor. As noted above, there are indications that preventive care is very weak in Romania. Both of these reasons suggest that it would make sense to increase the budget for primary health care (PHC) gradually but substantially. This increase could reach at least 10 to 12 percent of total health expenditure in no more than five years in order to create a financial and professional basis for family physicians to raise their profiles and prestige. Family doctors should be providing preventive services such as screening for the early detection of cancer, diabetes, and TB and need to be involved in caring for the elderly, especially in deprived areas, in small hospitals that have been specially converted for this use. Funds will also be needed to train family doctors, purchase new equipment, and hire additional staff such as secretaries and social assistants. In addition, we are recommending that the government design and implement Health in All Policies (cross-sectoral population preventive programs), including introducing legislation to reduce risk factors (for example, raising tobacco taxes and banning tobacco in public spaces), national communications campaigns, and targeted population-based and individual-based preventive interventions and programs to reduce highly prevalent risk factors and increase cancer screening, vaccination, and growth monitoring.

INTRODUCTION

This Health Sector Functional Review is a part of a broad strategic and functional review of Romania's central public administration being undertaken by the World Bank on behalf of the European Community and the Government of Romania (GoR).

The overall purpose of the functional review is to:

- *Identify strengths and distortions* in the current organization, functioning and performance of the Romanian health system and *propose recommendations* to overcome the identified shortcomings.

- Facilitate a dialogue between the top decision-makers in finance and health.

- Expose the dissonance between the stated functions of the key health sector agencies and their effective role in service provision, regulation, and financing and the actual creation of selected health system inputs such as technologies, premises and personnel.

- Set the groundwork for increasing the availability and use of quality (especially quantitative) data, information, and intelligence.

A key methodological caveat concerns the boundaries of the health system in Romania. While it is well defined in some cases (for example, the Ministry of Health and the National Health Insurance House), in other cases those boundaries are less clear, with a number of agencies (other ministries, local governments, and various professional associations) playing a rather ill-defined role. The mandate and role of each existing agency/entity directly or indirectly involved will not be at the center of this work.

The Functional Review follows the *theoretical framework* first presented in the World Health Report 2000 endorsed in 2007 by the World Bank Health Nutrition and Population Strategy[8] and by the Tallinn Charter (2008).[9] In this Charter, all member states of WHO expressed that they "share the common value of the highest attainable standard of health as a fundamental human right; as such, each country shall strive to enhance the performance of its health systems to achieve the goal of improved health on an equitable basis, addressing particular health needs related to gender, age, ethnicity, and income."

The EU Member States agreed that, while national health systems are diverse, they share a common set of four distinctive functions: i) delivering health services to individuals and to populations; ii) financing; iii) stewardship; and iv) resources. Box 1 presents these functions as defined in the Tallinn Charter: Health Systems for Health and Wealth.

[8] Health, Nutrition, and Population (HNP) Sector Strategy Annex L page 169. http://go.worldbank.org/QY4FTNVJR1

[9] The Tallinn Charter: Health Systems for Health and Wealth, http://www.euro.who.int/__data/assets/pdf_file/0008/88613/E91438.pdf

Box 1: The Tallinn Charter: Health Systems for Health and Wealth

- **Delivering health services to individuals and to populations**
  - Policymakers throughout the region value strive to make possible the provision of quality services for all, particularly for vulnerable groups, in response to their needs, and to enable people to make healthy lifestyle choices.
  - Patients want access to quality care and to be assured that providers are relying on the best available evidence that medical science can offer and using the most appropriate technology to increase effectiveness and ensure patient safety.
  - Patients also want to have a relationship with their health care provider based on respect for privacy, dignity, and confidentiality.
  - Effective primary health care is essential for promoting these aims, providing a platform for the interface of health services with communities and families, and for intersectoral and interprofessional cooperation and health promotion.
  - Health systems should integrate targeted disease-specific program into existing structures and services in order to achieve better and sustainable outcomes.
  - Health systems need to ensure a holistic approach to services, involving health promotion, disease prevention, and integrated disease management program, as well as coordination among a variety of providers, institutions and settings, irrespective of whether these are in the public or the private sector, and including primary care, acute and extended care facilities and people's homes, among others.

- **Financing the system**
  - There is no single best approach to health financing; distinctions between "models" are blurring as countries develop new mixes of revenue collection, pooling and purchasing arrangements according to their needs, their historical, fiscal and demographic context, and their social priorities and preferences.
  - Financing arrangements should sustain the redistribution of resources to meet health needs, reduce financial barriers to the use of needed services, and protect against the financial risk of using care, in a manner that is fiscally responsible.
  - Financing arrangements should also provide incentives for the efficient organization and delivery of health services, link the allocation of resources to providers on the basis of their performance and the needs of the population, and promote accountability and transparency in the use of funds.
  - The overall allocation of resources should strike an appropriate balance between health care, disease prevention and health promotion to address current and future health needs.

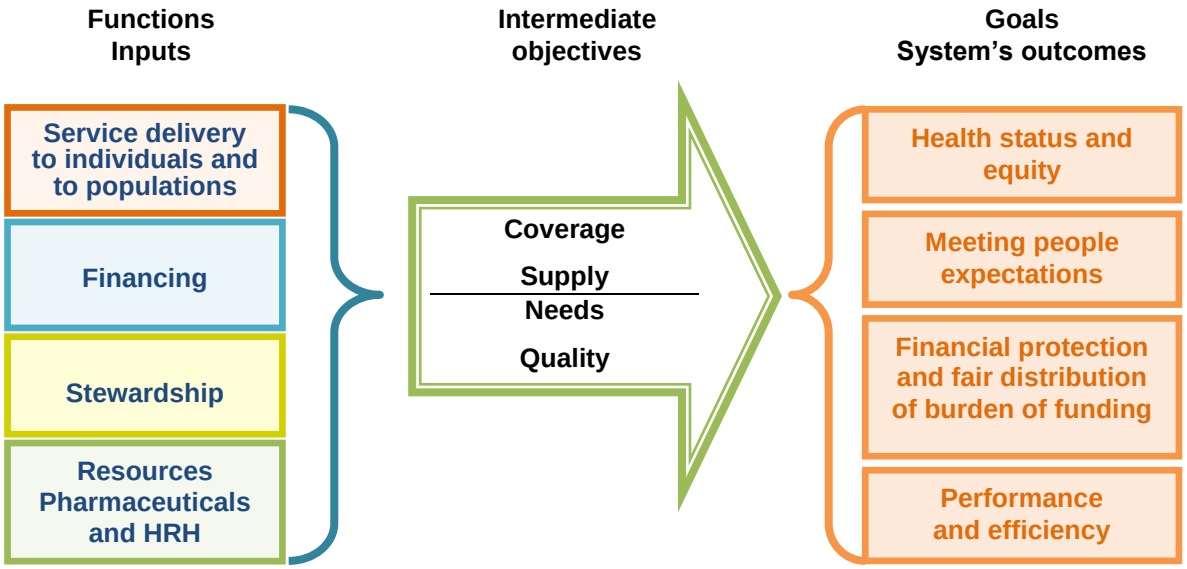
- **Creation of resources**
  - In a rapidly globalizing world, generation of knowledge, infrastructure, technologies, and, above all, human resources with the appropriate skills and competence mix requires long-range planning and investment to respond to changing health care needs and service delivery models.
  - Investment in the health workforce is also critical, as it has implications not only for the investing country but for others due to the mobility of health professionals; the international recruitment of health workers should be guided by ethical considerations and cross-country solidarity, and ensured through a code of practice.
  - Fostering health policy and systems research and making ethical and effective use of innovations in medical technology and pharmaceuticals are relevant for all countries; health technology assessment should be used to support more informed decision making.

- **Stewardship**
  - While each Member State has its own way of governing its health system, ministries of health set the vision for health system development and have the mandate and responsibility for legislation, regulation and enforcement of health policies, as well as for gathering intelligence on health and its social, economic and environmental determinants.
  - Health ministries should promote inclusion of health considerations in all policies and advocate their effective implementation across sectors to maximize health gains.
  - Monitoring and evaluation of health system performance and balanced cooperation with stakeholders at all levels of governance are essential to promote transparency and accountability.

Figure 1 reflects the overall approach of the document. We will analyze the functions of service provision, financing, stewardship, and input creation with an emphasis on human

resources, after which we will discuss the adjustments to those critical functions that will be needed to transform towards the outlined goals and system's outcomes.

Introduction Figure 1: Theoretical Framework used for this Functional Review



Source: Adapted from Travis P and Kutzin J, 2004, unpublished.

In Chapter 1 of this Functional Review, we analyze the achievements related to Romania's health sector performance and the challenges that it faces (System's outcomes). By comparing some health indicator with other EU countries, this chapter examines the health status, equity and the distribution of burden of funding .

Then in the following chapters, we look at the four health system functions separately. Service provision is analyzed in Chapter 2 which focused on the delivery of health services to individuals and to populations, including the analysis of health needs versus service supply, how the service are currently organized and managed, relevant aspect of the information system and the main priorities. In Chapter 3 (Financing) we analyze the financing trends and management, relevant aspects of risk pooling and associated expenditures, and payment to providers and incentives.

The analysis of the stewardship function (Chapter 4) is structured around three specific sub-functions: leadership (providing a vision and direction to the health system); regulation (ensuring the fair behavior of health actors and a level playing field for all); and accountability (monitoring and inspecting performance outcomes). In Chapter 5, we focus on resources in two areas – the management of pharmaceuticals and the most important aspects of the management of human resources in health.

Finally, in Chapter 6, we present our main recommendations from the functional analyses but through a different prism – that of the different thematic pillars that we are suggesting the government tackle in its reform of the health sector. These are: (i) improving governance and management; (ii) streamlining the health service network and re-launching quality control systems; and (iii) improving preventive services and equity (in access to health services and access to good quality services). Chapter 6 also includes a matrix of findings and

recommendations in each of these three pillars, identifying how each of the recommendations is related to the specific health function that it would be supporting.

Some attention to the context and history of the Romanian health system is warranted. Before 1989, Romania had a Semashko-type of health system, publicly financed and owned, with fully centralized decision-making and no purchaser/provider split in service provision. The system emphasized in-patient and specialist care and large-scale public health, top-down interventions against mostly infectious, single-cause health problems. Romania therefore inherited a health infrastructure characterized by high fragmentation, inefficiency, and rigid regulation.

Major health reforms in 1989 and then again in 1998 introduced the decentralization and pluralism of the provision of services, compulsory social health insurance, and contractual relationships between providers and purchasers. The provider mix consisted of a few small private businesses providing primary health care (PHC), many low-, mid-, and high-level hospitals, and a few facilities for specialized outpatient services and secondary ambulatory care (diagnosis and treatment). There was little coordination and referral among these levels of services or between facilities**.**

During this period, the reforms prompted the Ministry of Health to seek additional ways to increase access to cost-effective quality health services. In that context, the National Health Insurance House (NHIH) was created under the jurisdiction of the Ministry of Health (MoH), and payments for physicians' services stopped being based on inputs and became a mixture of capitation, fees-for-services, and case-based payments using a variation of the Australian diagnosis-related group (DRG) system (A-DRG version 5.1) to classify case mixes. Since then the NHIH negotiates an annual contract for services with each hospital; a separate tariff is negotiated for each hospital that takes account of the cost structure historically prevailing in that hospital. The MoH has recently prepared a Hospital Rationalization Strategy that aims to improve the management and increase the operational efficiency of hospitals and to introduce elements of a wider sector reform; this strategy still needs to be approved and implemented by the government.

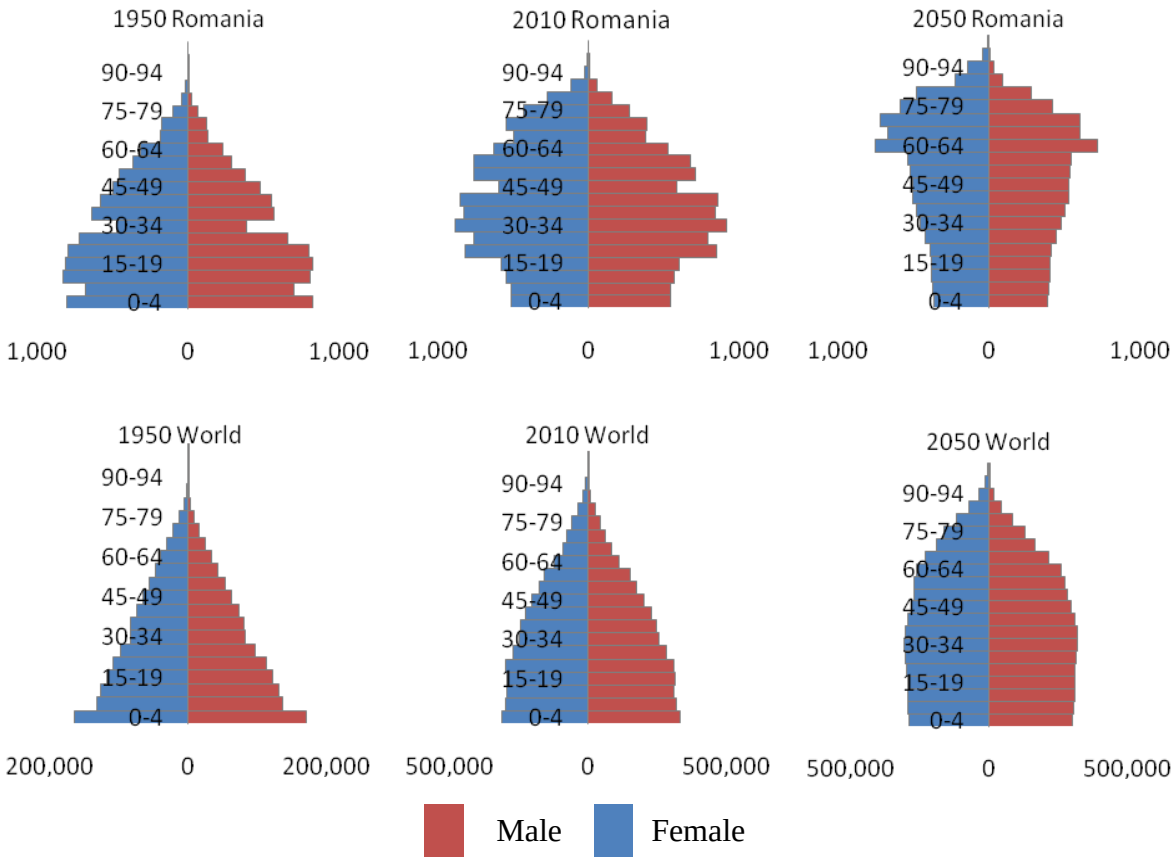
1. HEALTH SECTOR PERFORMANCE: CHALLENGES AND ACHIEVEMENTS

1. This chapter describes the performance of the health sector in Romania. The first section provides a brief description of the demographic challenge facing the country. The second section then describes Romania's health outcomes in comparison with other European countries. The third section discusses the challenge of reducing inequities in access to and the financing of health care.

1.1. The Demographic Challenge

2. Romania's population is shrinking and ageing. While this trend can be seen in other countries as well, it is particularly pronounced and severe in Romania.

Figure 1.1: Romanian and World Population Age Structure, in Thousands



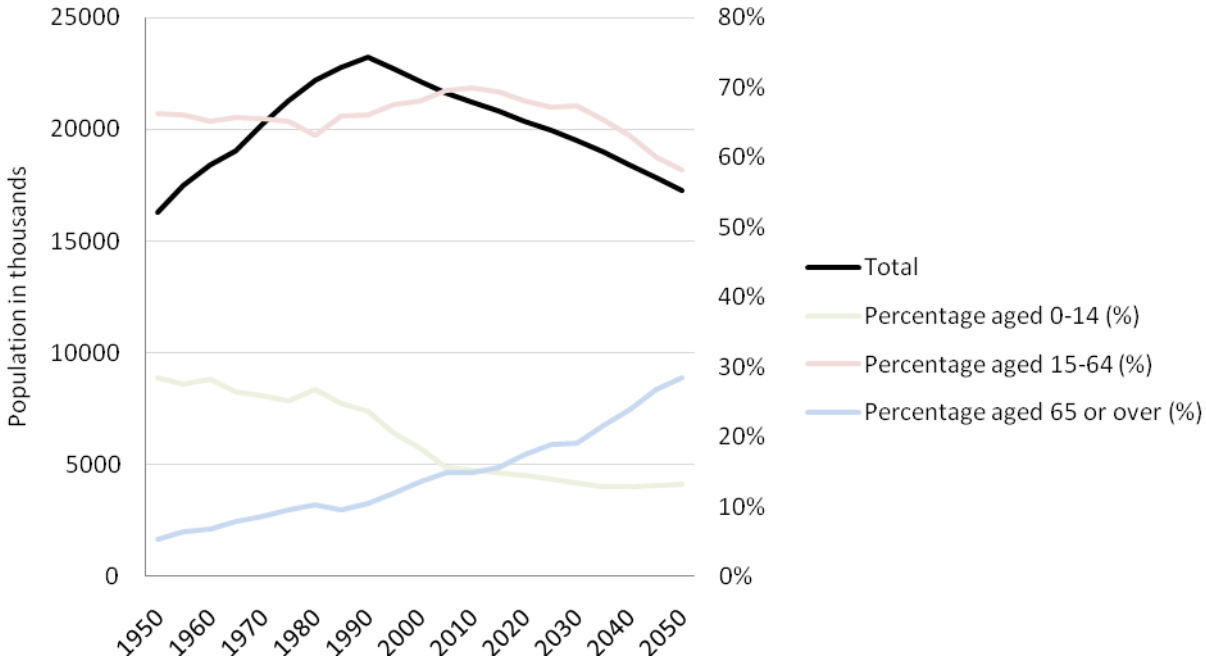
Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects: The 2008 Revision*, http://esa.un.org/unpp, December 20, 2010

3. Figure 1.1 illustrates the speed with which Romania's population is aging as a combined result of decreased fertility and mortality. The world as whole is also experiencing

this transition. In the 1950s, the global population was concentrated in the younger age ranges, with every age group being larger than the one older than itself, creating the traditional "age pyramid" shape. Today this is no longer the case, as the youngest age groups are approaching the same size than adults. By 2050 this adjustment in age structure is projected to become more prominent with all adult and youth age groups approaching the same size, this termed the "squaring of the pyramid."

4. Romania is ahead of the rest of the world in this transition. As early as 1950, the very youngest groups in the population were no longer the largest. Today, unlike the rest of the world, the bulk of the Romanian population is made up of adults between 20 and 60 years of age. By 2050, it is projected that the largest segment of the population will be the elderly (those over 60 years old), and the population will have the distribution of an "inverted pyramid," with each age group being larger than the one younger than itself. This "inversion" is very rapid and severe in Romania relative to the path of the global transition.

Figure 1.2: Total Romanian Population and Age Cohort Distribution Over Time



Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects: The 2008 Revision*, http://esa.un.org/unpp, December 20, 2010

5. Figure 1.2 highlights another key feature of Romanian demography, its shrinking population. The population of Romania has been steadily decreasing since 1990 and is projected to continue this decline. At its peak, the population of Romania was over 23 million, while today the population is slightly over 21 million. The UN projects the total population will fall to approximately 17 million by 2050, bringing it back down to 1950 levels.

6. Figure 1.2 further highlights the shift in age patterns that is accompanying the overall population decline. It is clear that the number of 0 to 14 year olds has been declining as proportion of the population for the entire period. At the same time, the 65 and over population has been continuously growing as a share of the population. Today, these two cohorts are of equal size, and in the future the elderly will outnumber the young in Romania. This change, along with the continued shrinking of the population, is the defining feature of Romanian demography.

1.2. Health Outcomes Benchmarked against Other European Countries

7. How do the health outcomes of Romania compare with those of other countries? The European Observatory's influential Health in Transition report of 2008 describes how in the early 1960s, health status in Romania was comparable to that in Western European countries but since then the health of Romanians has increasingly lagged behind these countries. The report describes how Romania has one of the highest infant mortality rates in the European Region, has a life expectancy (at 73 years) that is considerable lower than the EU average and has one of the highest levels of cardiovascular disease in the European Region.

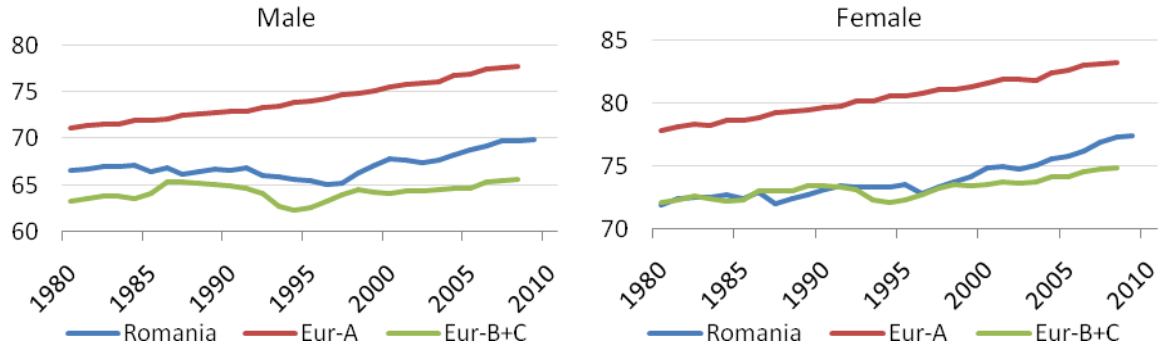
8. An exercise conducted for this functional review compared health outcomes for the initial 15 members of the EU (EU15), those of the twelve more recent accession countries (EU12) and those of Romania. Again, the study shows Romania lagging behind both the EU15 and the EU12. In terms of life expectancy, infant mortality, maternal mortality, ischemic heart disease and cancer of the cervix, the EU15 countries rank higher, the EU12 countries rank second and Romania lags behind.

9. But most EU countries have significantly higher incomes than Romania. In 2005, the EU15 countries had average per capita incomes of US$33,800; the EU12 countries of US$7,500 and Romania of US$3,920. A study by the WHO European Office attempted to compare health outcomes for countries with similar income levels (the 2005 "Highlights on health in Romania.

10. The report compared Romania with the average results in what are termed Eur-A and Eur-B+C countries.[10] Eur-A and Eur-B+C are distinguished by very different income levels. In 2008 Eur-A countries had on average per capita gross national product (GNP) of approximately US$40,000, while the average per capita GNP of Eur-B+C was US$7,700. Romania was very close to Eur-B+C with US$8,300. In this section, we examine some of the metrics used in the WHO report, updated for this functional review with the most current data.

10 The Eur-A countries are Austria, Belgium, Croatia, Cyprus, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, San Marino, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom. The Eur-B+C countries are Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Poland, the Republic of Moldova, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Tajikistan, the former Yugoslav Republic of Macedonia, Turkey, Turkmenistan, Ukraine, and Uzbekistan.

Figures 1.3 and 1.4: Life Expectancy at Birth by Sex in Years



Source: http://data.euro.who.int/hfadb/, Dec 14, 2010

11. Over the past three decades, life expectancy in Romania has been growing for both males and females, with female life expectancy rising slightly faster. Despite this growth, Romania still falls far short of the Eur-A countries and has not been narrowing the gap over the course of the sample period. However, its life expectancy either matches or exceeds that of the Eur-B+C countries.

Figure 1.5:Probability of Dying before the Age of 5 per 1000 Live Births

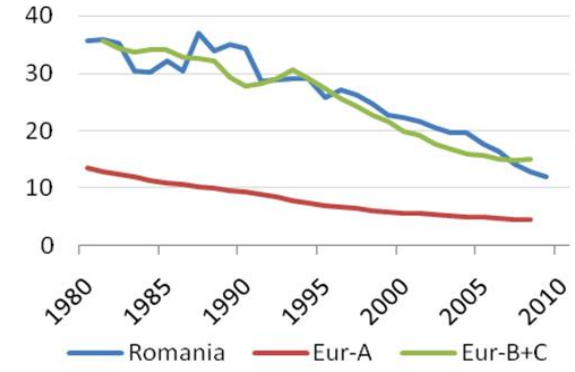
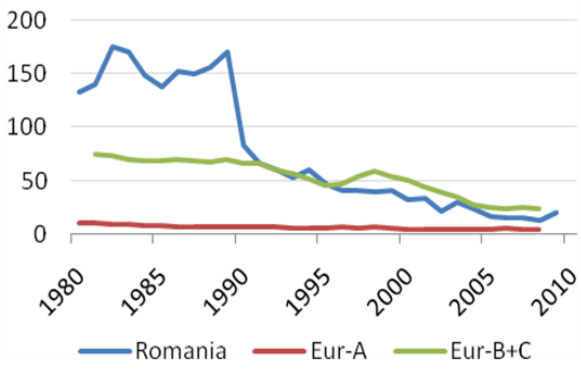


Figure 1.6: Maternal Deaths per 100000 Live Births.



Source: http://data.euro.who.int/hfadb/ Dec 14, 2010

12. Romania has experienced a huge drop in the probability of under-5 mortality, a drop similar to the one experienced on average by all Eur-B+C countries. This drop has outpaced the reduction in under-5 mortality seen in the Eur-A countries. As such, Romania is narrowing the historically large (and still persistent) gap between itself and the Eur-A countries.

13. The trends in outcomes for maternal mortality over the last 15 years have been similar to those in under-5 mortality. Maternal deaths are falling in Romania in line with the drops experienced in Eur-B+C countries, yet Romania continues to lag behind Eur-A nations.

Figure 1.7: SDR, Ischemic Heart Disease (all ages per 100,000, male)

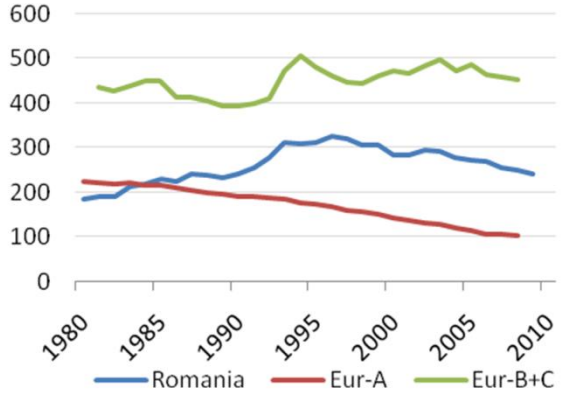
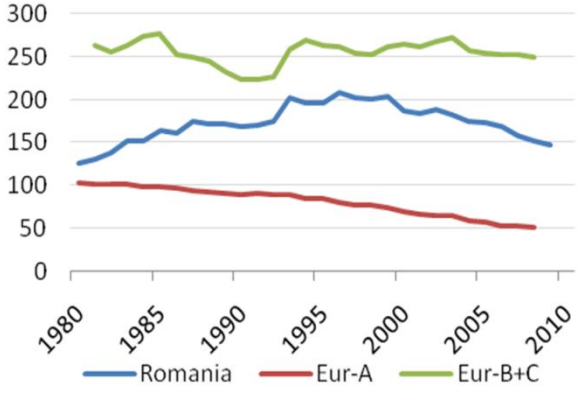


Figure 1.8: SDR, Ischemic Heart Disease (all ages per 100000, female)



Source: http://data.euro.who.int/hfadb/ Dec 14, 2010

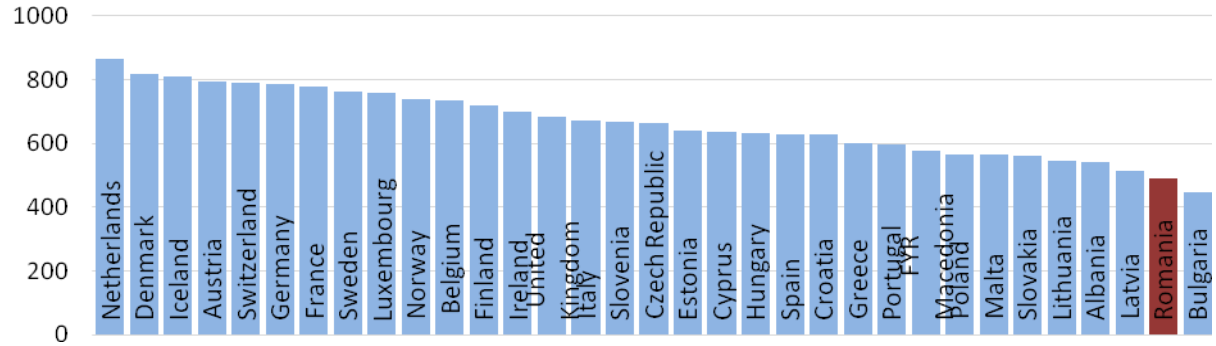
14. Both of the reports cited heart disease as the number one cause of death in Romania, meaning that success in cardiac interventions is an important indicator of the success of the health system. In Figures 7 and 8, it is clear that the Romanian standardized death rate from heart disease for both genders is well below that of their peers in the Eur-B+C group and higher than that of Eur-A countries. Since the mid-1990s, Romania has made progress in lowering the death rate from heart disease but only limited progress in matching the cardiac outcomes of Eur-A countries.

15. As discussed above, the Romanian health system falls short of health outcomes in richer nations, but it performs well relative to countries with similar income levels. Romania is either at the level of its peer countries or slightly ahead. In the case of death rates from heart disease, Romania strongly outperforms its peers, which is a great accomplishment. However, it is important to acknowledge that the Romanian health system cannot only be evaluated in terms of its health outcomes but also on a range of multi-dimensional challenges.

Comparing Other Dimensions of the Health System

16. Without intending to endorse any specific health system ranking in this review, we took note of the Euro Health Consumer Index 2009 (Figure 9). This scored the health system of 33 EU area countries across 38 indicators grouped into 6 categories including: the presence of no-fault malpractice insurance, the speed with which CT scans are obtained, heart infarct case fatalities, the amount of informal payments made to doctors, and the existence of a pharmaceutical subsidy. The data were gathered from public sources and from a privately commissioned provider survey. The overall results can be seen in Table 1.1. The total score is the sum of all the subcategory scores.

Figure 1.9: Total Euro Health Consumer Index Score



Source: Euro Health Consumer Index 2009

17. The Euro Health Consumer Index found the overall performance of the Romanian health sector to be lacking. Romania placed second to last of the surveyed countries, receiving a score similar to those of Bulgaria, Latvia, and Albania. Its overall health system score was a little over half of the score received by the Netherlands, which came top of the list.

Table 1.1 Euro Health Consumer Index 2009 Ranking by Selected Sub-Category for Romania

Category	Rank
Patient rights and information	28
e-Health	32
Waiting times	16
Outcomes	29
Range and Reach of Services	30
Pharmaceuticals	25
Overall	32

Source: Euro Health Consumer Index 2009

18. Table 1.1 presents Romania's ranking among the 33 EU area countries on each of the subcategories of the index. It is notable that, while Romania ranked very low in almost all categories, it was in the middle of the group for waiting times. This result was surprising and did not correlate with the overall results. Many top performers stumbled in this category, while several lagging health systems performed well in it. The Euro Health report investigated this and was unable to find a clear explanation.

19. In all other categories, Romania has underperformed relative to the other European nations. Romania was nearly last in e-Health integration and the range of services offered. Patient rights were found to be under-developed, and its ranking for outcomes was very low. However, its ranking in the subcategory of pharmaceuticals was not so low. Looking at the

indicator values that make up this subcategory, it is clear that Romania has done better than the European average in adapting pharmaceuticals to the layman but has performed below the European average on every other indicator in the field of pharmaceuticals.

20. Overall, the Romanian health system achieves a fair to high level in many health outcomes relative to its peers at the same level of development while lagging behind the outcomes of the much wealthier European nations. The challenge for Romania is to address all of the many different aspects that affect the performance of its health system.

1.3. Equity in Health Care

21. This section discusses vertical equity (appropriate unequal treatment of unequals[11]) in the health care system of Romania, examining problems of access and of financial protection. We conclude that there is a large problem of inequity in Romania, mostly due to a lack of access to the health care by the poor. In this section, we will use the terms "rich and poor" to mean individuals in the top and bottom quintiles of the income distribution.

22. The discussion in this section focuses on vertical equity in access among people who declared they "needed health care." This greatly underestimates the degree of inequity that actually exists because the perception of "health care need" is very biased. The rich have higher expectations of receiving care when they are ill and perceive a much greater "need" than the poor – they declare that they "need health care" twice as often as the poor (20 percent versus 11 percent, see Table 1). This difference in perceptions of the rich and the poor is much greater than the difference between the urban and the rural populations (Annex 1, Table 2).

23. One of the biggest problems in Romania's health sector is a lack of access. Among individuals who say that they need health care, many do not seek care. This is the case for almost half of the poor compared with only 20 percent of the rich (Annex 1, Table 4). This gap between rich and poor is particularly large in the treatment of chronic disease: 42 percent of the poor versus 17 percent of the rich (Annex 1, Table 4). The actual gap is probably larger as many of the poor with chronic conditions are not aware of their need for care as discussed above. When we carried out simple simulations that assumed that the need for chronic care is similar among rich and poor, we estimated that a whopping 85 percent of the poor who need chronic care are not receiving it.

24. The years of economic growth increased access for the population as a whole. Access grew from 61 percent in 1996 to 71 percent in 2008. However, all of this increase in access was concentrated among the richer income groups, with the access of those in the top income

[11] "Analyzing Health Equity Using Household Survey Data" Owen O'Donnell, Eddy van Doorslaer, Adam Wagstaff and Magnus Lindelow, The World Bank, Washington DC, 2008, www.worldbank.org/analyzinghealthequity.

quintile increasing from 65 percent to 81 percent. Meanwhile, there was almost no increase in the access of the poor, which remained at 52 percent (Annex 1, Table 25).

25. It is important to notice that, according to the survey data, both the rich and the poor mostly use public services (Annex 1, Table 5). In 2008, only 5 percent of the rich used private services. Within public services, both the rich and the poor use family doctors most frequently. The rich have significantly more access to specialized services than the poor, but visits to specialists remain a small fraction of total visits, even among the rich (Annex 1, Table 5).

26. *Inequity in the Roma Community.* A recent study, "Health and the Roma Community in Europe"[12] found that vertical inequity is also a significant problem among the Roma community in Romania. The study sampled 759 households and found that only 4.6 percent considered that they were in a bad or very bad state of health, but this could be an example of a different cultural concept of health and disease. The study also found:

i) There is a widespread lack of knowledge concerning the rights Roma people are entitled to within the National Health System, regardless of insurance.
ii) Of the minors in the sample, 45.7 percent did not receive all of the vaccines required by the National Immunization Program.
iii) In 9.1 percent of these cases, the parents claimed they were not been aware of the immunization program.
iv) Of the whole sample, 62.8 percent had taken medicines in the two weeks prior to the interview.
v) There is widespread self-prescription of drugs. One out of every two users of cold or flu remedies and six out of every seven antibiotic users take these drugs without ever consulting a doctor.
vi) Of the people included in the survey, 97 percent make at least one visit to the doctor each year.
vii) Of individuals who needed health treatment in the twelve months preceding the survey, 20 percent did not seek medical services because they considered that either the medical services were too expensive or they could not afford them.

27. These findings suggest the need of specific strategies and programs to enhance the supply of culturally appropriate services on one hand and implement communication programs to increase health service demand on the other.

28. These *ad hoc* programs would best focus on: (i) population and individual based preventive interventions to reduce high prevalent risk factors among Roma communities (tobacco, alcohol and overweight); (ii) screening women for breast and cervical cancer; (iii) reducing self-medication; and, in particular, (iv) strengthening vaccination and growth monitoring programs for children. Other areas that will require specific strengthening through target programs are oral hygiene, oral prevention, and oral treatment.

[12] "Health and the Roma Community," an analysis of the situation in Europe; a six-country project promoted by the *Fundacion Secretariado Gitano* and funded by the European Union.

29. *Out-of-pocket Spending*. Among those who need care, 20 percent pay nothing. The poor pay nothing much more often than the rich−36 percent versus 13 percent (table1.2). This difference is even more significant in the case of inpatient services, with 57 percent of the poor paying nothing compared with only 13 percent of the rich (table 1.3).

Table 1.2: Percentage of Individuals who Paid for Health Care among Those who were Ill or had an Accident in the Reference Month or suffer from a Chronic Illness or have a Handicap (by quintiles)

Individuals who paid for health care ...	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Nothing	36.8	24.3	20.1	15.7	12.3	20
by receipt (only)	62.1	73.8	77.5	80.9	83.1	77
without receipt (only)	0.3	0.4	0.5	0.6	0.7	0.5
both by receipt and without receipt	0.8	1.5	1.9	2.8	3.9	2.4
Total	100	100	100	100	100	100
Total N (unweighted)	**1804**	**2763**	**3301**	**3795**	**3717**	**15380**

Source: HBS, 2008

Table 1.3: Percentage of Individuals who Paid for Hospitalization among Those who were Hospitalized in the Reference Month (by quintile)

Individuals who paid for hospitalization…	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Nothing	56.8	53.9	39.4	24.1	13.3	29.8
only by receipt	6.5	3.3	4.9	13.5	11.9	9.4
only without receipt	36.6	37.2	54	59.2	70.1	57.4
Both by receipt and without receipt	0	5.6	1.7	3.2	4.7	3.5
Total	100	100	100	100	100	100
Total N (unweighted)	**24**	**42**	**65**	**75**	**109**	**315**

Source: HBS, 2008

30. *Informal payments*. Who makes informal payments more often – the rich or the poor?[13] Among the total population that had been hospitalized, 30 percent declared that they had paid nothing. This was much more common among the poor (57 percent) than among the rich (13 percent). Among those making payments, 85 percent of respondents made informal payments; this frequency was the same for the rich and the poor (Annex 1, Table 11). As explained above, the main problem of inequity in Romania is one of access, not of actual financial costs but of the impact of potential costs on access.

31. *Who pays for medicines*? Most of the population pay for drugs – 77 percent of those in need of care (Table 1.4). According to the law, the poor who are enrolled in the minimum

[13] The questionnaire used for the survey captures informal payments for hospitalization better than for other services; hence we only refer to the data for hospitalization.

income program are exempt from paying for prescription drugs. but it is important to point out that the law is far from being applied in reality as most of the poor in need of care do pay for their medicine (62 percent of them). Do the poor benefit from a higher rate of subsidy (as a percentage of the total cost of their medicines)? According to the survey, people in all income quintiles benefit from approximately the same reference price (comparing among all beneficiaries of reimbursement).

Table 1.4: Percentage of Individuals who Paid for or Benefitted from Complete Reimbursement for Medicines among Those who were Ill or had an Accident in the Reference Month or who suffer from a Chronic Illness/have a Handicap, by quintiles

	Q1	Q2	Q3	Q4	Q5	Total
% of individuals who paid for or benefitted from complete reimbursement for medicines	63.9	77.3	81.9	84	86.9	80.5
Percentage of individuals who paid for medicines	62.4	74.2	77.5	80.9	83.2	77.2
Percentage of individuals who benefitted from reimbursement for medicines	15.2	22.7	32.5	37.7	43.5	32.4

Source: HBS, 2008

2. SERVICE DELIVERY IN ROMANIA

2.1. Introduction; the Objectives of the Study

32. As stated in the Tallinn Chapter (2008),[14] delivering health services to individuals and to populations is one of the four functions of any health system. Well-managed, quality health services do improve the health of individuals and populations.[15] In Romania, overall life expectancy at birth, for example, grew up from 67 to 73 between 1990 and 2008 as a consequence of improved population and personal/individual services, for example, in maternal and child health and vaccinations as well as some social interventions in the areas of nutrition, education, and housing.

33. Health services are part of the health system.[16] In order to achieve its goals, every health system develops and implements certain functions (sets of repeated activities that directly influence results) both in sectoral terms, such as health improvements or financial protection against the costs of disease, and in broader terms, such as human capital and productivity development. Service production – that is, combining resources and factors to produce specific services – is one of those functions. Some critical questions related to health services in every society are: (i) which services should be produced (profiles)?; (ii) how many of each and for whom (target population)?; (iii) delivered by whom (professionals)?; (iv) how good should they be (quality standards)?; (v) how should they be organized and managed?; and (vi) at what cost (resources)?

34. Since the 1990s, the government in Romania has attempted to change the way in which services are delivered as part of the modernization of Romanian society that preceded EU integration. Many hospitals have been modernized, the provision of emergency services has been enhanced, and some privately provided services have emerged. Separating health care purchasers and providers and introducing contractual relations between them has been another key component of the modernization process.

35. However, distortions in the service delivery structure have not been eliminated. Roughly speaking, primary care services continue to be weak and under-funded; too much installed capacity in too many hospitals remains from the days when input costs were very cheap; and duplication abounds. All this has repercussions for financial sustainability, which in turn can lead to a situation where salaries are depressed and do not provide enough of an incentive to retain staff as well as a number of other chronic problems.. Romania has two overarching objectives in its effort to further reform its health service production: (i) first,

[14] The Tallinn Charter: Health Systems for Health and Wealth. http://www.euro.who.int/__data/assets/pdf_file/0008/88613/E91438.pdf

[15] Dubos, 1959; McKeown and Lowe, 1966; Preston, 1980; and McKee and Nolte, 2004

[16] "All organizations, institutions, and resources whose mandate is to improve - promote, restore, or maintain - health within the political and institutional framework of each country; it includes personal and population services as well as the actions for influencing other sectors, but not the actions of those other sectors as such." Duran A, Kutzin J, Martín-Moreno JM and Travis P (forthcoming) Understanding health systems: scope, functions and objectives, in Figueras et al (eds) Health Systems, Health and Wealth, Cambridge University Press).

modernizing facilities in terms of numbers and modalities and aligning them better with the health needs of the population and replacing the segmented structure inherited from the communist era with equitable, affordable, quality, efficiently networked, and sustainable evidence-based health services; and (ii) second, improving the way in which institutions are organized and managed, introducing professional decision-making to replace political motivation in the use of resources, promoting efficiency, servicing the customer, and maximizing productivity and impact.

36. In that perspective, the purpose of the Functional Review is to identify both strengths and distortions in the current organization and performance of health services. This review basically consists of a comprehensive mapping exercise, assessing existing services from multiple angles with regard to their potential to contribute to improving health status and equity, protecting people against the catastrophic consequences of disease, increasing responsiveness to citizens' expectations, and carrying out all of these functions efficiently.

37. The review has three goals: (i) to understand the impact of different service delivery strategies and the right service coverage; (ii) to improve and monitor service quality, efficiency, and responsiveness; and (iii) to propose ways to strengthen service delivery infrastructure and management, with an emphasis on information systems.

2.2. Health Needs Versus Overall Service Supply and Demand

38. The obvious precondition for health services to be relevant is that their supply should respond as much as possible to the health needs of the country, however they are measured (McKee and Healy, 2002). There should be a correlation between the burden of disease – that is, morbidity plus mortality plus disability – with the supply of health services (and ideally its demand from and use by the population). In other words, if we measure health services by the most important diseases (for example, communicable and non-communicable) and by target recipients (for example, mother, child, gender, and income), then this should give us a balanced picture of how well the health sector is meeting need.

Main Causes of Mortality

39. No thorough study exists in Romania about the comparative effort devoted to different types of diseases (for example, communicable versus non-communicable). The two main causes of death are cardiovascular diseases (719.8 deaths per 100,000 inhabitants with a generally stable pattern) and cancer (220.8 deaths per 100,000 inhabitants with a significant ascending trend).

40. Among cardiovascular diseases, cerebro-vascular diseases and hypertension are the main killers (227 deaths and 122 deaths per 100,000 inhabitants respectively). They have a significant impact on the patient's quality of life and are the main reason for hospital admissions. There are strikingly few services at the moment that are aimed at preventing these diseases, and there are serious indications that these diseases are not properly fought by

family physicians or specialists in ambulatory care facilities. The MoH and NHIH program on cardiovascular diseases, in particular, seems to focus not on the fight at population level against tobacco and alcohol use, limited physical activity, sedentary lifestyles, and bad dietary habits but rather on providing surgical devices and materials for treating the about 7.300 complicated cases that occur each year) in tertiary cardiovascular hospitals/departments hospitals (which are also financed through regular DRG payments for the same expenses) .

41. The situation regarding cancer is also complex. There has been an increase in the number of diagnoses in the last 20 years, including a large proportion of late stage cases due to limited early detection. Romania also has the highest cervical cancer incidence and mortality in Europe, at almost three times the European-27 average rate. A curable disease if diagnosed early, cancer of the cervix encapsulates the current failure of the Romanian health system to align services with need. For example, a screening strategy was developed in 2007 but has not been implemented until now "due to a lack of staff for Pap smear tests at national level." Among men, lung cancer is in turn the main cause of death with a 10 percent higher incidence and mortality than the EU average. The high incidence and mortality of oral cavity and larynx cancer also suggest the need for much more emphasis on fighting the smoking habit and fostering early cancer detection. The fight against smoking in Romania is particularly weak given the huge influence of tobacco on overall mortality.

42. The limited effect of the huge cancer budget increase (from about 50 million Euros in 2005 to about 200 million Euros in 2009) gives rise to a number of important hypotheses. Although the fact that this lack of impact has never been properly assessed speaks for itself, waiting lists and the rise in the number of patients requiring treatment seem to be only part of the explanation. A key reason seems to be the change in prescription to new and more expensive drugs plus a shift in procurement methods away from centralized purchasing and towards drug acquisition by each hospital.

43. The availability of services devoted to certain diseases and medical specialties can be indirectly estimated by the budgets for those services and the number of contracts offered by the NHIH to different specialists. However, these figures are also affected by the internal and external migration of doctors on the global market and how medical schools respond to social, economic and political changes in terms of which specializations they emphasize. The most significant increases in the number of MDs in recent years have been the following specialties: cardiology, general surgery (both adult and children), plastic surgery, gastroenterology, hematology, neurology, and ob/gyn (although the increase in the availability of specialists has coincided with a freezing in the ambulatory care budget of the NHIH). Hospital administrators claim that they are experiencing a deficit of specialists in anesthesiology, intensive care, neonatology, laboratory, radiology, and hospital pharmacy (see also below in the section on human resources).

Care for Specific Age Groups

44. In 2009 Romania had about 21.47 million inhabitants, of whom 51.3 percent were female. Mother and child health in general and infant mortality in particular deserve to be

given special attention both as a summary indicator of health and development and also because of their significant correlation with the availability and quality of care. As a result of specific programs, maternal and child health indicators improved between 1990 and 2008, although infant mortality in 2008 was equal to the average level of the WHO's European Region but was twice as high as the rate in high-income countries (11 and 6 deaths per 1,000 live births respectively). Much the same can be said about the under-5 mortality rate, which was 13 and 7 respectively in 2008.[17] This is probably partly due to underlying socioeconomic factors but also indicates that there are serious deficiencies in the care of mothers and babies, especially at the primary health care.[18]).

45. The increasing proportion of people over 65 years in Romania (14.9 percent, up from 10.3 percent in 1990) is the result of both reduced mortality and fertility and the emigration of the younger segments of the population. Specific services for the elderly have been gradually developed over the last 10 years, but there are still far fewer than in the rest of Europe. Home care and palliative care, for example, are provided mostly by private small non-governmental organizations, working in contract with a Health Insurance House after the patient has been referred by a family physician, specialized doctor, or a hospital. The fact that the NHIH signed only 295 medical home care services contracts in 2009 give an idea of the huge uncovered need, which is exacerbated by the lack of social home care services (as most Romanians cannot afford private nursing homes).

46. Palliative care services are also just beginning to emerge, with just a few beds and a limited number of trained staff out of a total of 4.8 million services paid for by the NHIF in 2009. The situation regarding medical devices for organic and functional impairment is similar, with huge waiting lists increasing every year for almost all devices available but only 2,900 contracts signed by the NHIH in 2009. In the same year, all modalities of rehabilitation in ambulatory care (in other words, not only for the elderly) generated 1.2 million consultations and 16.8 million paid services.

2.3. Overview of Health Services

47. Health services can be classified in many ways[19] and these different classifications vary in terms of their usefulness for policy development on organization and financing. The key is to categorize services in terms of the person who receives the service (for example, personal health services delivered to individual clients or specific populations or collective, non-personal, public health services delivered to groups or the whole population). This is related to – but distinct from – the classification of goods and services according to how the

[17] WHO (2010)
[18] Shell et al (2007)
[19] For example, the place of the concerned service in *the cycle of the disease* (health-promoting, preventive, therapeutic, or rehabilitative services); the *services involved* in its delivery (for example, medical services or nursing services); the *severity or urgency of the expected response* (regular or emergency care services); the *intensity of* care (ordinary or intensive care services); and the *technology* involved (such as surgical, internal medicine, laboratory, or imaging services).

benefits of service consumption are distributed.[20] Importantly, personal services include not only curative services but also some that are preventive and promotional. A smoking cessation session with a family physician is as much a personal service as an operation for appendicitis or the care provided to a patient affected by Alzheimer's disease. A television campaign against smoking or in favor of water chlorination services – to name but two – would, in turn, be preventive population-based services.

48. Most disease control efforts require more than one intervention category. Immunization, for example, usually involves both a personal and a population service (administering the dose and producing an education leaflet respectively). To guide policy, what matters is not whether a particular service is preventive or curative but rather how the relevant interventions are to be organized and delivered. The efficient combination of rival, excludable services and non-rival, non-excludable services is extremely important from a financing point of view. Understanding the intervention strategy and the organization of service delivery are necessary steps in the development of a systematic approach to health system reform and a corresponding financing policy.[21]

49. The other key dimension of service production and financing policies is the concentration of technology at each service delivery level, with the appropriate and efficient increase of modalities of care (primary, secondary, and tertiary level of care).

50. The delivery of health services in Romania is regulated by Law 95/2007, which provides a framework for all health service providers. Every year, based on a proposal from the National Health Insurance House (NHIH) and the Ministry of Health (MoH), the government approves: (i) a Framework Contract setting out the conditions for providing health services within the social health insurance system and (ii) a policy on the national public health programs. In their proposal **,** the NHIH and the MoH set out, for example, the list of services covered by the public system, tariffs, quality and quantity indicators, and eligibility criteria for providers. The Framework Contract includes both the list of services to which insured people are entitled and a list of procedures that are not covered (for example, plastic surgery for those over 18 years old, in-vitro fertilization, certain dental services, and organ and tissue transplants).

Overview of Population-based Services

[20] *Public goods* are those services whereby, once they are purchased and provided, their consumption by one person does not diminish consumption by another. For example, it is not possible or is prohibitively costly to exclude "free riders", such as treatment of polluted air or an educational campaign poster against drunk driving, and therefore they can only be funded from the public purse. *Quasi-public goods* are those whose consumption has benefits (or costs) that extend beyond the person consuming them (a *positive externality* – for example, immunization or the treatment of a communicable disease – or a *negative externality*, in the case of antimicrobial resistance). *Private goods* are those whose consumption benefits only (or predominantly) the person receiving them (Carande-Kulis, VG, TE Getzen, SB Thacker, 2007, "Public goods and externalities: a research agenda for public health economics." *Journal of Public Health Management Practice* 13(2):227-232).

[21] Duran and Kutzin, (2010)

51. Historically, one way in which the government has encouraged the public to use key health services has been to fund, organize, and deliver what have been called "public health programs." Initially these programs covered certain communicable diseases such as TB but latterly they also cover non-communicable diseases such as hypertension. Typically, these programs focus on a specific disease or set of diseases, and include a mix of interventions – both personal services (with externalities) and population-based services. Because the financing and delivery of these programs tend to be vertically integrated and separate from the financing and delivery arrangements of the rest of the health system, they are often called "vertical programs."[22]

a. National Public Health Programs

52. Few of the programs developed by the MoH during the last 20 years in Romania are population health programs like immunizations. Rather, most are support programs with positive externalities, for people with specific acute or chronic diseases (such as HIV, TB, sexually transmitted diseases, or rare diseases) or with very high costs for the limited number of individuals who are affected by them (such as cancer, diabetes, and organ and tissue transplants). The Diagnosis and Treatment with High Technology Equipment Program (50.3 million RON) for example, is exclusively managed by the MoH and provides funds to treat some 150 patients per year with robotic surgery and some 100 patients per year with Gamma-Knife brain surgery. In contrast, the Renal Dialysis Program (which funds drugs and medical materials for some 13,000 renal failure patients per year at a cost of 491.2 million RON) and the Orthopedic Surgery Program (which acquires medical prostheses for 11,000 orthopedic disease patients per year at a cost of 30.8 million RON) are exclusively funded by the NHIH. As it can be seen, the personal services included in the "public health" programs are often not even primary care services but instead provide surgical devices and treatment for patients in specialized hospitals, which in any case are also funded through regular DRGs by the NHIH.

53. Although the initial intention was that the MoH would develop and finance "preventive" public health programs while the NHIH would finance "curative" programs, there are significant overlaps between the two institutions, largely due to the inadequate criteria used to assign their respective jurisdictions. For example, the budget managed by the MoH for the Cancer Program is 1.3 million RON (for HPV vaccinations) plus 270.3 million RON (for treatment), while the NHIH manages a budget of 493.6 million RON for treatment alone. The Diabetes Program funds insulin pump treatment from the MoH with a budget of 2.7 million RON while monitoring and treatment with oral anti-diabetic drugs and insulin is funded by the NHIH with 341.6 million RON. One-third of the Rare Diseases Program is funded by the MoH while two-thirds are funded by the NHIH (32.8 million versus 65.4 million) with no apparent explanation for this division. The Endocrinology Program, which provides testing to identify thyroid dysfunction induced by iodine deficits, is also divided between the MoH and NHIH in similar proportions (3.1 million RON versus 6.5 million

[22] Liu and O'Dougherty (2004)

RON). Many programs have very small budgets. For example, the Control of Nosocomial Infections and Drug Resistance Program has an annual budget of a bit more than 2 million RON, which is unlikely to be sufficient for providing effective services for the entire country. These "public health" activities are seldom supported by well-targeted communication activities and campaigns.

b. Tuberculosis

54. Although the figures are starting to fall, TB remains a serious problem in Romania. Morbidity and mortality markedly increased in between 1985 and 2002, making TB notification rates the second highest in the WHO's European Region (after Kazakhstan) and 10 times higher than the EU average. Also, the number of multiple drug-resistant cases is increasing. The geographical distribution of TB by counties is inversely correlated with income and education level, and mostly affects adults in the second half of life.

55. Four ministries (Health, Defense, Justice, and Internal Affairs) run their own TB control networks. In the network run by the MoH and NHIH, diagnosis and treatment are provided free of charge within the National Program for TB control (NPTC). This program is very fragmented, involving family doctors, lung diseases dispensaries, specialized hospitals, a network of laboratories led by their own working group, epidemiologists at the central and local health authority levels, county coordinators, a National Pneumology Institute in Bucharest, and a Supervising Commission. The MoH, NHIH, WHO, the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM), the World Bank, USAID, and a number of NGOs are all involved in implementation and financing TB control in Romania.

56. From 2004 to 2010, money allocated for patient treatment increased by almost 50 percent even though the number of treated patients decreased by about 25 percent. This could be explained by the increasing cost of drugs in response to the increased resistance to treatment, but it might also be explained by the controversial practice of allowing hospitals to purchase their more expensive drugs by themselves – as opposed to acquiring them through national tender as in the past.

c. HIV/AIDS

57. In the 1990s, after a series of dramatic cases in the 1990s in which children acquired HIV/AIDS during medical procedures, including blood transfusions, HIV/AIDS surged with 22.7 new cases per 100.000 children and over 1,000 new cases at the national level. Since then, the incidence has decreased. In 2009, there were 0.32 new cases per 100.000 children and 1.09 new cases per 100.000 adults (some 428 new cases), which was below the European average. About 8,734 Romanians are currently affected (236 of whom are under 14 years of age) of whom 7,306 receive anti-retrovirals (203 under 14 years of age). Patient survival rate has increased from 3 months in 1990 to almost 90 months in 2009.

58. A relevant feature of the HIV/AIDS program is again the fact that between 2004 and 2010 its total budget increased by 80 percent whereas the number of patients increased by only about 25 percent. Once more, as in the case of TB, this probably reflects the acquisition of more expensive drugs and more comprehensive monitoring tests. However, it may also reflect the fact that from 2003 to 2006 drugs were provided based on prices established in a national tender whereas after 2007 each hospital started purchasing their own drugs by local tendering. Discontinuity in funding in 2010 meant that the supply of drugs to patients was interrupted, with induced drug resistance to specific products and higher cost afterwards.

Overview of Personal Services

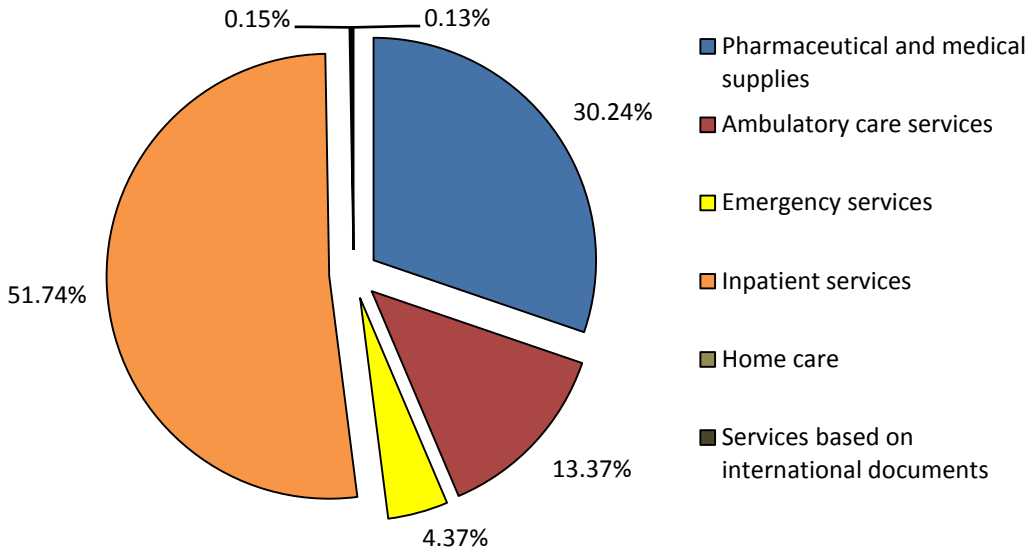
59. The overwhelming majority of total health expenses in Romania are devoted to personal services, which also occurs in developed countries. As already explained, personal health services can be, for example, medical, surgical, pharmacological, preventive, curative, rehabilitative, emergency, regular, or long-term, each with their own pros and cons.

a. Drugs

60. The list of drugs covered by the insurance system is approved every year based on a proposal made by the MoH and NHIH and includes three sub-lists. Drugs on list A are covered at 90 percent of the reference price and delivered by pharmacies. Drugs on B are covered at 50 percent of the reference price and are delivered by pharmacies, except for retired people with a pension below 700 LEI/month who get 90 percent coverage. Drugs on list C are covered at 100 percent of the reference price, are included in the public health programs, and are delivered by both pharmacies and hospitals.

61. Over 30 percent of the budget allocation of NHIH funds is spent on "drugs and medical materials" (drugs *per se* representing almost 25 percent). This is certainly one of the highest percentages in Europe.

Figure 2.1: Health Budget Allocation, 2009



62. The fact that fewer than 10 percent of patients use more than 70 percent of the pharmaceutical budget is not unusual, but the fact that the first 20 most prescribed drugs in Romania are expensive new pharmaceuticals is. The highest consumption rates of these drugs can be found in university centers and some poor counties. The increasing financial deficit of the NHIH has generated an increase in the debt payment period for reimbursed drugs and an accumulation of arrears. According to some, this has already driven out of business pharmacies and import companies and jeopardizes the entire insurance system. The NHIH has now imposed limits on the prescription, and starting in 2011, will reimburse pharmacies within 180 days (up from 90 days) after their report has been validated by the DHIH.

b. Different Service Levels by Concentration of Technology

63. The distinctions among primary health care (PHC), secondary, tertiary, in-patient, and out-patient care is crucial given the evidence available on their respective contribution to health results.[23] Five percent of NHIH money is spent on primary care, about 13 percent on ambulatory care, and over 50 percent on hospitals.

b.1. Primary Health Care

64. In theory PHC institutions produce health promotion and disease prevention campaigns and diagnosis, treatment, and rehabilitation services, usually supported by essential technology (for example, laboratories). In practice, the services provided by the 11,800 family doctors in Romania are monitoring of pregnant women and newborns, child immunization, and the monitoring of patients with chronic diseases, with virtually no attempt at disease prevention. Few people seem to visit their family physician other than when they

[23] Starfield (1992)

get a major disease (such as cancer or severe cardio-vascular disease) and need prescriptions for their drugs. Each primary care practice can conclude a single contract with a single Health Insurance House (HIH) which can be a national HIH, a district HIH, the Defense, Public Security, and Justice HIH, or the Transport, Construction, and Tourism HIH regardless of the HIH with which the patient is insured. Yet the income of family practices is currently very low (due to the very low value of their point on the funding scale) and does not allow doctors to make any investments since they are hardly able to pay the salary of a nurse from their budget.

b.2. Ambulatory Specialists

65. Ambulatory specialists provide services in clinics, diagnosis and treatment ambulatory centers, and ambulatory centers for rehabilitation to patients referred to them by a family physician (except emergency cases and certain chronic diseases). . Some 11,447 specialized doctors – about the same number as that of family doctors – contracted with the NHIH in 2009 (70 percent more than in 2004) but the services for which they were reimbursed grew by only about 15 percent. Contracted laboratory and radiology doctors increased by 120 percent whereas reimbursed lab and radiology tests grew much less (about 33 percent). From 2011 onwards, the number of specialized doctors and lab and radiology investigations to be paid for by the HIH will be determined by a local council and a copayment will be introduced.

66. Many public ambulatory centers, including those attached to hospitals, were closed in recent years supposedly because of very low HIH tariffs (plus poor business management). At the same time, large private ambulatory clinics with modern equipment for diagnosis and treatment were opened in Bucharest and major cities. The private sector has grown by 60 to 70 percent per year in the last three years, despite the economic crisis, and a large fraction of specialized ambulatory care is now delivered by private providers with no contract with an HIH. Substantial out-of-pocket payments are required to access these services, which means that low-income people (especially in rural areas) usually go directly to a hospital emergency room when they need treatment.

b.3. Hospitals

67. In the period after World War II, Romanian hospitals only provided internal medicine, surgery, pediatric, and obstetric and gynecological services to around 100,000 to 150,000 people.[24] In modern Romania, general hospitals offer up to 40 different kinds of care and serve populations of 250,000 to 300,000 people. Inherited from the communist period**,** there are also a large number of hospitals that deal with only one disease or condition such as TB and cancer, delivering both in-patient and ambulatory care services.

[24] Maybin (2007)

68. Romanian hospitals currently account for about 50 percent of the total health budget, which is largely in line with the proportion in the rest of the EU. At the end of 2010 there were 431 public and more than 70 private hospitals receiving patients by referral from a family physician or a specialist (except for emergency cases and patients with communicable diseases). The hospitals that provide the most complex tertiary care (such as neurosurgery, cardiac surgery, and organ transplants) are located in the capital and in the six university centers and receive state subsidies through the MoH health programs. Bucharest has a total of 40 hospitals, six of them emergency hospitals with between 1,500 and 1,800 beds, providing care in virtually all basic specialties. Each of the 41 counties/districts has a roughly similar 1,500-bed emergency hospital plus four to ten additional small hospitals, for a total of 121,348 hospital beds in the public sector. Many only operate at full pace (including surgery units) for five to seven hours a day, five days a week. Small hospitals vary greatly in terms of their size, diagnosis and treatment equipment, resolution capacity, and number of specialties. The lack of staff (especially doctors) is often obvious, and many are unable to offer round-the-clock medical care. Most of the workload involves uncomplicated diagnoses such as mild upper respiratory infections for which very few medical procedures are performed. Severe cases are systematically transferred to county hospitals and malpractice is not unusual and is often widely covered in the mass media. Despite this, virtually all of the 500 public and private hospitals in Romania had a contract with the NHIH in 2009.

69. Since 2008, most public hospitals (246) have been under the jurisdiction of the local authorities for public administration (LAPA), except tertiary care hospitals and "institutes," which are still under the jurisdiction of the MoH. Many LAPAs have allocated significant funds for equipment and rehabilitation for these hospitals and contribute with up to 20 percent of their total running costs. The MoH is preparing a three-year national plan that will specify the total number of public and private beds to be contracted by the NHIH and has expressed its intention to close or restructure some 200 hospitals, reduce the number of beds by 3,885 in 2011 and by a further 2,512 in 2012.

2.4. The Organization and Management of Service Production

70. One of the explicit objectives of the health system reform in Romania over the last 20 years was to increase the population's access to quality health care services by: (i) strengthening primary care; (ii) increasing the number and type of ambulatory care services; and (iii) decreasing the need for hospital services, but none of these actions seems to have been accomplished.

Balanced Geographical Distribution

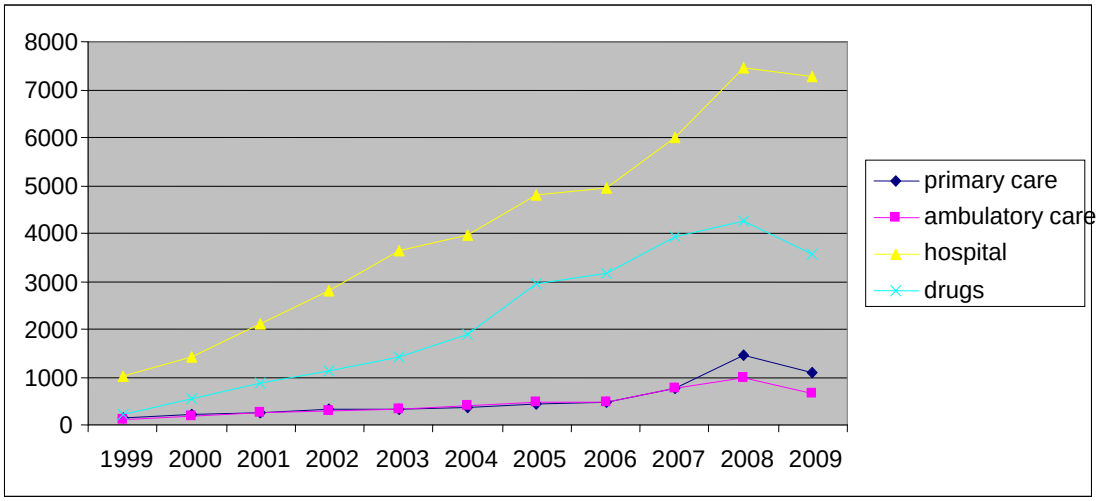
71. If measured by the uneven distribution of primary and specialized providers across the country and by the patterns of health care expenditure by "levels of care." Despite significant improvement in urban areas, access to health services in rural areas is often worse than it was in 1990. As indicated, most family physicians work in contract with an HIH (very few work

full time privately), but while 45 percent of the population lived in rural areas in 2009, the urban/rural ratio of family doctors is 59 to 41. Only about 80 percent of the rural population are registered with family physician, while in urban areas the percentage goes up to about 95 percent.

72. The population covered by family physicians ranges from 1 for more than 2,000 inhabitants (in poor counties in eastern Romania as well as some more prosperous counties) to 1 per 1,000 inhabitants (in Brasov, Timis, Dolj, and Alba). Counties in critical economic situations also lack ambulatory care centers and have fewer hospital admissions. Some 100 villages still have no family doctor, mainly in Eastern Romania, where eight below-average income districts are served by a single university city (Iasi). In general, the capital and western Romania have more university centers and tertiary care, hospitals, ambulatory centers, and family physicians. Counties with the lowest hospital admission rates are the poor ones around Bucharest and those around Cluj.

73. These variations in geographical access to health care were highlighted in a 2009 World Bank household budget survey. In 2008 some 30 percent of the population did not request medical care when they needed it (this percentage had fallen from about 40 percent in 1996 mainly due to improved emergency services). Yet almost 60 percent of people admitted to hospital said that they made informal payments to physicians in 2008 compared to about 30 percent in 2001. As also indicated already, some 63 percent of the households in the poorest quintile had paid out of pocket, compared with 88 percent of the richest. The high costs involved in visiting a clinic/hospital in a large city (for transportation as well as under-the-table payments) cause most rural people, particularly those over 60 years of age, to refrain from seeking medical care (other than from emergency services) unless they are in the late stages of a disease, which in turn usually means higher costs and a worse prognosis. This seems to be particularly the case with the gipsy population, whose access to health services did not increase significantly despite programs implemented during recent years with financial support from the EU.

Figure 2.2: Health Insurance Fund Allocation to the Main Health System Components, 1999-2009



74. The situation correlates with a specific pattern of expenditure during the last 10 years. Although the HIF budget increased from about 500 million Euros in 1999 to about 4 billion Euros in 2010, PHC and ambulatory care virtually received no additional funds, except in 2007-2008 during the National Program for Population Health Status Evaluation. The budget allocated to PHC has remained very small both as percentage of the total budget and in real value, and may not even cover the real cost of health services. Salaries have fallen, and dissatisfaction among patients and providers seems to be widespread. At the national level, investments made by the MoH, LAPAs, and private investors have been concentrated mostly in Bucharest and city university centers, whose medical equipment has increased significantly.

75. It is no surprise that the population's access to ambulatory services has decreased and that in-hospital treatment has increased as a consequence of the severe under-financing of ambulatory care, the lack of control over hospital admissions, and the fee-for-service mechanisms introduced in hospitals and ambulatory facilities. Patients are often admitted to hospitals for diseases that could be treated in ambulatory centers, for example, uncomplicated hypertension and back pain.

The Fragmentation of Service Delivery Institutions: Networks and Continuity of Care

76. The structure and management of health care organizations can enhance their efficiency in providing continuity in quality services, but there is evidence that most facilities in Romania suffer from unnecessary fragmentation (Haggerty et al, 2003). There are no thorough studies regarding PHC usage rates or continuity of care. In anecdotal terms, the biggest problem in this area seems to be that, while the entitlements in the current benefits package and care processes are formally open-ended, in practice they are severely rationed by a lack of resources. Bluntly put, Romania has few doctors and continues to lose some by emigration but those it appears that those who remain under-used because of their questionable professional prestige. This means that they are not serving as a filtering mechanism to specialists and hospitals for the bulk of patients.

77. In addition, referrals and counter-referrals seem to be irregular and mediated by uncontrollable factors, which makes patient flows unpredictable. As mentioned before, for example, many hospitals – especially small ones – closed their ambulatory centers because the HIH reimbursement did not cover their real costs (of, for example, salaries, equipment, drugs, and consumables). Out of the 10,606 contracts made between HIHs and ambulatory care doctors in 2009, only 311 contracts involved doctors working in a hospital ambulatory center. As a consequence, hospital doctors cannot see their patients before or after their hospital stay or have to do so in an overcrowded emergency room or in the hospital lobby, which involves long waiting times for the patients.

78. The National Health Programs, which we analyzed above, were unnecessarily fragmented in their financing. More attention needs to be paid also (in terms of volumes,

costs, and overall standards) to the services provided by parallel sub-systems such as those currently run by the Ministries of Transportation and Infrastructure, Administration, National Defense, Interior, Justice and Citizens' Freedoms, the Secret Service, and the central political administration. These generally consist of medium-size (for Romanian standards, between 100 and 200 beds) hospitals offering five or six specialties, funded by the respective ministries. Use of these hospitals is restricted by membership, although some are said to accept patients with fewer restrictions than others as long as they pay. There is no health rationale for having four Ministries (Health, Defense, Justice, and Internal Affairs) each running their own TB control networks either.

Emergencies

79. Emergency services are provided by public providers (42 ambulance district units) and some 14 private providers plus, as already mentioned, hospitals. The ambulance centers work in conjunction with the district police and fire departments and since 2008 have used a single call center which has improved service significantly. In the last four years, the MoH has invested in emergency vehicles and medical equipment as well as in staff training (doctors, nurses and firemen) with financial support from EU. Information and communication systems and medical protocols have also been improved. As a result, the system has become more reliable, and the number of requests has increased continuously (more than 2.1 million in 2009, though some 20 percent have not been paid for by the NHIH).

80. This does not mean that emergency care in Romania has no problems. In the short term, there is a deficit of health professionals in hospital emergency departments and in ambulance centers because of their low salaries and hard working conditions. In the longer term, the risk that emergency care might replace regular care could not be underestimated. Emergencies are becoming the *de facto* entry point to the health system for most of the population, particularly the poor, and after the planned cuts in hospital beds, emergency hospitals will contain about three-quarters of all hospital beds.

Innovative Arrangements

81. Different specialized health care centers (for example, multi-purpose ambulatory, dialysis, blood transfusion, and mental health centers) have existed all over the world for decades. We assessed the existence and efficiency of these kinds of innovative care facilities in Romania to explore whether some of them can or should be merged or reorganized**.**

82. Relevantly, the decades-old concept of hospitals as discreet institutions working jointly with a powerful PHC sector in their communities is now subject to challenge. Today's hospitals are increasingly seen as outdated for a number of reasons, including their silo-like structure compartmentalized by clinical disciplines (even though patients increasingly have multiple simultaneous medical problems), their provision of episodic treatment (even though many patients have chronic conditions), their "batch and queue" way of operating (even though complex modern medicine requires flow and patients do not want their time treated as free), and the fact that they often function fully for only five days or for less than 40 hours a

week (even though the level of demand would now require them to operate for 18 or even 24 hours 7 days a week).[25]

83. The debate in Western countries about the changing role of hospital care is also influenced by: epidemiological changes (the spread of chronic diseases and the compression of morbidity[26]); technological progress that has made it possible to take many elements of modern care out of hospitals;[27] pharmacological advances in the fight against diabetes such as the insulin pump and continuous measurement of blood glucose;[28] the use of tranquilizers in the field of mental health;[29] the development of oral cancer chemotherapy;[30] and the use of anesthetic procedures that allow surgeries to be performed on an outpatient basis.[31] Another key reason in support of hospital reform is the overwhelming evidence on the significant increase in the costs of hospital care,[32] particularly of some core services (such as on-duty personnel, laboratories, blood banks, and maintenance) that might usefully be moved to new institutions[33] or even carried out at home.[34] The number of day-care centers is increasing in an attempt to enable patients to have a range of tests done in one place (for example, undergoing blood tests, X-rays and other diagnostic tests) and in one visit, thus avoiding the need for repeat visits and and/or replacing expensive hospital in-patient stays with more efficient alternatives such as "day surgery."

84. No low-cost, high-frequency services scheme has been organized yet, but in selected Romanian hospitals, some incipient day care arrangements have been organized to increase efficiency. When DRG-based payments for acute care were introduced in 2004-2005, day-care services were organized for patients who needed such services as chemotherapy, radiotherapy, or renal dialysis. The recognized benefits of this approach included a reduction in the average length of stay, lower service costs, increased patient satisfaction, and a lower risk of nosocomial infections. However, many services were developed without a tariff having been negotiated between the hospital and the HIH, and without proper hospital infrastructure. Over time, some hospitals included services that could be performed in ambulatory care with lower costs (such as the monitoring of complicated pregnancies, abortions, or tonsillectomies).

Service Production Facilities Management

85. Management disciplines provide abundant evidence of how managed production of services increases effectiveness and efficiency and improves quality. There is ample international evidence on the ways in which countries select and use managers in order to

[25] Edwards (2008)
[26] Fries (1983)
[27] Banta (1990)
[28] Nolte et al (2006)
[29] Heath (2005)
[30] www.cancercare.on.ca
[31] OECD (2007)
[32] Taheri and Butz (2005)
[33] Edwards and McKee (2002)
[34] Imison et al (2008)

produce health services. Direct ownership and regulation of these services by the government and private ownership are now the two extremes of a continuum, while intermediate categories now include semi-autonomy and publicly owned corporatization.[35] Autonomy in decision making – is perhaps the most crucial attribute of hospital governance today.[36]

86. Hospital activity in Romania is coordinated by the manager, the managing committee, including the medical director, the financial director, the nurse director, the ethics council, and the medical council. Even if the health law mentions that hospitals are autonomous institutions, public hospital managers remain politically appointed and have very limited flexibility in their management of hospital resources. For example, bed numbers for each hospital ward need to go through a months-long approval from the MoH. Funds received by the hospital from the HIH, MoH, and the local authority are rigidly allocated on a line item basis (in other words, specified for staff, drugs, or food, for example) that the manager cannot change. Also many hospitals have not been allowed to hire staff in recent years even if they faced severe personnel deficits, especially in intensive care, neonatology, laboratory, radiology, and pharmacy. Starting in 2011, hospitals are not allowed to spend more than 70 percent of the budget allocated to them by the HIH on salaries.

87. The use of managerial tools is also limited. Only a few hospitals assess patient satisfaction, and there is almost no quality control and very little standardization of processes. In 2010, the Ministry of Public Finance tried to impose the use of protocols for internal management, but very few hospitals have implemented this legislation.

88. Candidates for hospital manager positions have no chance to undergo the recommended management training,[37] which handicaps their ability to perform their jobs correctly. Although performance evaluations are required in the law and in the management contracts of all public hospitals, no performance evaluation has been conducted in the last three years, which is another strong disincentive for managers to improve their limited management skills. As result, they also have no incentives to improve management practices and structures (such as monitoring, contracting, negotiating, and improving personnel skills), which becomes a vicious cycle.

2.5. Relevant Aspects of Information Systems

89. More patient-centered health care is needed in Romania with improved marketing and clinical pathways in response to recent substantial changes in social preferences and user expectations.[38] For this to happen, integrated patient registers are a must. There is little doubt that modern service production requires robust management information systems (to keep track of outputs and costs) that allow managers to access their institution's performance data

[35] Preker and Harding (2003) and Lewis et al (2006)
[36] Saltman et al (forthcoming)
[37] WHO (2006)
[38] Walston and Kimberley (1997) and Coulter and Jenkinson (2005)

and give policymakers the chance to connect service facility management information with population health information.[39]

90. Romania has a basic information infrastructure at all service levels and collects a wide array of data in different software formats. However, these programs are not necessarily compatible due to the absence of one single coding system. This lack of data standardization makes communication, and system fragmentation and bureaucratic obstruction are not rare either. In truth, while there are substantial data collection efforts in the Romanian health sector, very little of the information is used (mostly for reimbursement and only rarely for managerial decisions and even more rarely for policymaking). The critical reason for this is that (poor) service quality has no repercussions – as the aphorism has it, "what matters gets measured." Since in reality no evaluations are made of service outcomes (such as the proportion of hospital re-admissions, the percentage of cancers diagnosed in late stages, and the number of diabetes-related lower limb amputations), the need for information is still seen in many ways as a luxury and managers feel no urgency to improve performance measurement.

2.6. Recommendations and Conclusions

91. **Streamline National Health Programs.** At the moment, the health system does not put sufficient focus on the prevention and early detection of diseases that have a major impact on health or on the main determinants of the burden of disease. Because of the continuous increase in cancer incidence and prevalence, the very slow pace of progress in the fight against TB, and the high costs of treating diseases in late stages, the government can heavily emphasize health aspects in all of its policies and adopt effective population campaigns and services, supported by screening and general preventive programs for the most relevant diseases and risk factors such tobacco and alcohol use. The proposed increase from 70 percent capitation and 30 percent fee-for-service to a 50:50 split in the reimbursement mechanism for family physicians is unlikely to increase their incentives to provide many preventive services. Also, there is too much overlapping and fragmentation in existing programs aimed at fighting catastrophic diseases. Irrespective of other consideration, their funding could be channeled through whichever agency pools best regular HIH resources as specific payments to service delivery institutions.

92. **Gradually but substantially increase the budget for PHC.** Increasing the budget for PHC from 5 percent at present to at least 10 to 12 percent of total health expenditure in no more than five years would create a financial and professional basis for family physicians to raise their profiles and prestige. Family doctors should be involved in providing preventive services (such as the early detection of cancer, diabetes, and TB and the fight against tobacco and other risk factors) and in the care of the elderly especially in deprived areas in small hospitals that have been specially converted. PHC needs to be used as the critical element in a "basic package" that will reduce inequity in access to health care. It should not be defined as

[39] Shortell and Kaluzny (2006)

a positive list of diseases covered but rather as a way to narrow the gap between "formal entitlement" (what the regulatory framework says) and "effective coverage" (access to and use of essential services), thus overcoming the economic, cultural, and geographical barriers that prevent many people from accessing effective care. Funds will also be needed to train family doctors, purchase new equipment, and hire additional staff (such as secretaries and social assistants).

93. **Rationalize hospital capacity.** Beyond closing hospitals, rationalizing capacity means delimiting patterns of quality, accessible secondary and tertiary care and defining networks including referrals and counter-referrals. Also, high-resolution ambulatory diagnostic and treatment schemes for high-volume, low-cost specialized services need to be developed in response to demographic, technological, and economic challenges. There is a need to differentiate "true tertiary care" hospitals upfront and to formulate one or more hospital re-structuring models that incorporate the best international experience for optimizing key dimensions of performance. The creation of functional networks and/or the integration of hospitals and specialized centers – perhaps even including primary health care – will yield economies of scale and increase outreach. This will allow for innovation in the structures, functionalities, and the architecture of the health facilities.[40] This would best be supported by broad coverage of emergency services and should take into account the decentralization of service production ownership to municipalities and the private sector.

94. **Professionalize service facility management.** Giving managers some authority over decision-making is an indispensable correlate of the effective provision of health services. Facility managers need more flexibility to manage resources than they are currently allowed. For example, the HIH budget should not be assigned on a line item basis (covering, for example, salaries and drugs), the number of beds should be approved only by the local authority as the owner with no approval needed from the MoH, staff should not be considered to be public employees, and salaries should be negotiated individually, with no restrictions imposed on hiring. Collaborative work should be encouraged to ensure that clinicians and institutions actively exchange information, including using common definitions and standards with systematic feedback. Measures for preventing and mitigating errors would need to be developed, and lessons learned from these errors should be used when re-designing whatever aspects of the system are not functioning well and in eliminating any productivity bottlenecks. Maintaining updated and precise information systems will be a decisive factor in improving decision-making. Proper training and performance measurement schemes also need to be put in place.

95. **Institutionalize quality-oriented performance appraisals.** The quality and safety of health care providers is a high priority in Romania. This could start with the licensing of medical professionals and continue through accreditation and certification and schemes such as Total Quality Management (TQM) if needs be. A well-known process for identifying necessary improvements in clinical and non-clinical areas (ranging from process re-design

[40] Rechel et al (2009)

and clinical management, triage in emergency care and organization of operating theaters, to patients' appointments) is "tracing" patient pathways. This process would best be immediately adopted for patients with selected pathologies or conditions (for example, pregnancy, diabetes, and cancer) and their use of key support services such as diagnosis, radiology, and laboratory services. In parallel, the NHIH could use "selective contracting" with the best hospitals instead of making deals with virtually all 500 hospitals. The government could ensure that private sector providers operate within a clear set of regulations on tariffs, without risk of cream skimmed market segmentation. The private providers should be given some flexibility within these regulations and should be openly invited to participate.

References

Banta H.D, 1990, Future health care technology and the hospital, Health Policy, 14 (1), 61-73

Coulter A and Jenkinson C, 2005, European patients' views on the responsiveness of health systems and healthcare providers, European Journal of Public Health 2005 15(4):355-360.

Dubos R, 1959, Mirage of Health: Utopias, Progress, and Biological Change. New York: Harper & Row

Duran A and Kutzin J, 2010, Financing of Public Health Services and Programs: Time to Look into the Black Box, in Kutzin J, Cashin C and Jakab M, 2010, Implementing Health Financing Reform; Lessons from Countries in Transition, WHO on behalf of the European Observatory on Health Systems and Policies, 247-269.

Edwards N and McKee M, 2002, 'The future role of the hospital' British Medical Journal vol. 331

Edwards N, 2008, Hospital Reconfiguration, Presentation during the Venice Summer School, European Observatory on Health Systems, Brussels

Fries JF, 1983, The compression of morbidity. Milbank Mem Fund Q Health Soc; 61:397-419

Haggerty JL et al., 2003, Continuity of care: a multidisciplinary review. BMJ. 2003 November 22; 327(7425): 1219–1221

Heath D, 2005, Home treatment for acute mental disorders: an alternative to hospitalization, Taylor & Francis Group, New York: Routledge

http://www.cancercare.on.ca/ocs/clinicalprogs/oncnursing/ consulted 24 Dec. 2010

Imison C, Naylor C, Maybin J, 2008, Under one roof. Will polyclinics deliver integrated care? London: The King´s Fund,

Kantar Health, 2010, Oncology Market Access Europe, Spain, December; Paris, 28-30

Lewis R, Alvarez-Rosete A and Mays N, 2006, Regulating Health Care -International Perspective on the Challenges facing the English NHS; London: King's Fund. www.kingsfund.org.uk/publications/kings_fund_publications/under_one_roof.html

Liu, X and S O'Dougherty. 2004, "Purchasing priority public health services," HNP Discussion Paper, The World Bank's Resource Allocation and Purchasing Project, Washington, DC: The World Bank.

Maybin J, 2007, The Reconfiguration of hospital services in England, London: The King´s Fund, pages 1-2 http://www.kingsfund.org.uk/publications/briefings/the_2.html.

Mardarescu M. - Epidemiology of HIV infection in Romania, "Romania where?", The Fifth National Congress regarding HIV Infection

McKee M and Healy J, 2002, Hospitals in a Changing Europe, Open University Press: 3-14

McKee M, Nolte E, 2004, Does Health Care Save Lives? Avoidable Mortality Revisited Nuffield Trust

McKeown T, Lowe CR. 1966, "The modern rise of the population", Oxford: Blackwell

Nolte E, Bain C, et al., 2006, "Chronic diseases as tracer conditions in international benchmarking of health systems: the example of diabetes." Diabetes Care 29:1007-1011

OECD Health Data 2007, OCDE París, International Association of Ambulatory Surgery, OECD Health Data 2008, Paris

Preker AS, and Harding A, 2003, Innovations in Health Service Delivery: The corporatization of Public Hospitals, Washington DC: The World Bank.

Preston S, 1980, "Causes and Consequences of Mortality Declines in Less Developed Countries in the Twentieth Century," in Richard A. Easterlin, ed., Population and Economic Change in Developing Countries, Chicago: University of Chicago Press

Rechel B, Wright S, Edwards N, Dowdeswell M and McKee M, 2009, Investing in Hospitals of the Future, European Observatory on Health Systems and Policies, Brussels

Saltman R, Duran A and Dubois H, forthcoming, Re-Structuring Hospital Governance in Europe, Emerging Models and Challenges, European Observatory on Health Systems, Brussels.

Schell CO, Reilly M, Rosling H, Peterson S and Ekström AM, 2007, Socioeconomic determinants of infant mortality: A worldwide study of 152 low-, middle-, and high-income countries Scand J Public Health May 2007 35: 288-297

Shortell S and Kaluzny A, 2006, Health Care Management: Organization Design and Behavior, p. 10

Starfield B, 1992, "Cross-National Comparisons of Primary Care", in: Primary Care. Concept, Evaluation and Policy. Oxford University Press, New York, p.219

Taheri PA and Butz DA, 2005, Health Care as a Fixed-Cost Industry: Implications for Delivery. Surg Innov. 2005; 12: 365-37

Walston S, Kimberley J, 1997, "Re-engineering hospitals; experience and analysis from the field", Hospital and Health Service Administration, 42: 143-163

World Health Organization, 2006, Working together for health, The World Health Report, World Health Organization, Geneva

World Health Organization, 2010, World Health Statistics 2010, WHO, Geneva.

eu-cancer.iarc.fr European Cancer Observatory

www.ms.ro - Ministry of health - Annual reports on national public health programs

www.NHIH.ro – National Health Insurance House – Annual activity reports 2007-2009

www.tbnews.ro

www.fondulglobal.ro

www.worldbank.org – Health indicators

www.sar.org – Romanian Academic Society – Policy brief no. 52 – The Health System, work in progress – Dec. 2010

3. FINANCING

3.1. General Trends in Financing

96. Financing is another critical function of health systems. As the EU members stated in 2008 (in the Tallinn Charter)[41]: (i) there is no single best approach to health financing; (ii) financing arrangements should redistribute resources to meet health needs, reduce financial barriers, and protect against the financial risk of using care within the available fiscal envelope; (iii) financing arrangements should provide incentives for the efficient organization and delivery of health services; and (iv) the overall allocation of resources should strike an appropriate balance between health care, disease prevention, and health promotion to address current and future health needs.

97. Romania has historically committed a lower share of its national wealth to health care than other countries. Recent figures from 2008 show that it spends around 4.8 percent of its gross domestic product (GDP) on health, whereas the European average is around 9.2 percent. The share of health in GDP grew until 2005 when it reached 5.2 percent of GDP, but it has subsequently been falling. The public contribution to health care spending has also increased from 2.9 to 3.8 percent of GDP.[42] As such, Romania devotes the smallest share of its wealth to health of all the accession EU countries. Table 3.1 below shows clearly that Romania's absolute level of health spending and adjusted spending per person are both outliers in comparison to its neighbors and to other accession countries.

Table 3.1: Health Expenditure as % GDP-2008

Country	% GDP	$ PPP(*)
Romania	4.8	686
Estonia	6.1	1263
Poland	7.0	1213
Czech Republic	7.1	1781
Hungary	7.3	1437
Latvia	7.5	1286
Slovakia	7.8	1738
All EU average	**9.2**	**3075**

Source: WHO –Health for All Database, 2008
Note: * PPP is purchasing parity per capita, in US$ terms

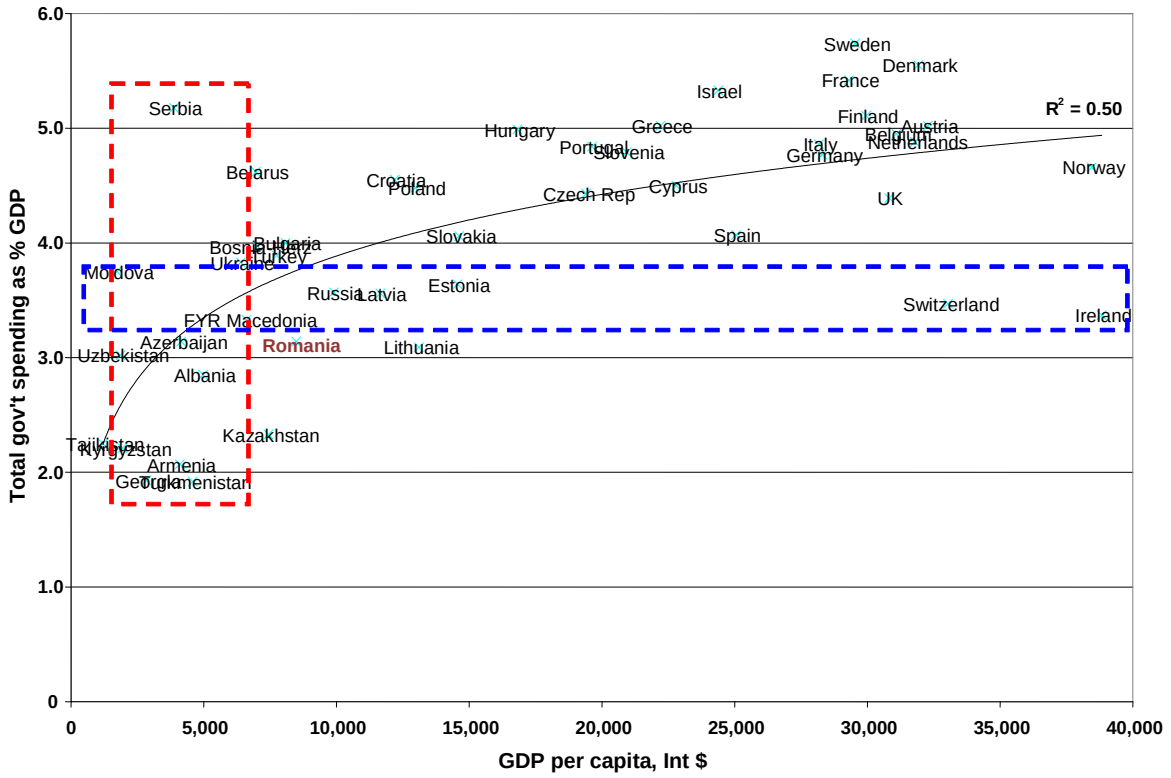
98. One factor to consider in the overall financing of the system is the size both of the country's overall tax receipts and of its the wealth. In this regard, the level of consolidated budget revenues in Romania is much lower than the EU average. Between 2006 and 2009, consolidated revenues averaged 32.6 percent of GDP in Romania while the EU-27 average

[41] The Tallinn Charter: Health Systems for Health and Wealth, http://www.euro.who.int/__data/assets/pdf_file/0008/88613/E91438.pdf

42 Docteur, Elizabeth. 2009. "World Bank Sector Assists Crisis-Hit Eastern Europe Countries." ECA Knowledge Brief.

was 44.5 percent. This is compounded by the fact that the share of total state spending allocated to health is also low (10.3 percent of total public expenditure as of 2008) when compared to the EU average of 15 percent of government expenditures. This is the lowest share of public spending in any EU country. However as Figure 1 demonstrates, the relative share of GDP spent on publically financed health care in Romania is not significantly out of line with that spent by countries of a similar wealth level.

Figure 3.1: Comparative Public Spending on Health



Source: Kutzin J, WHO/EEU Health Conference, Copenhagen, 2007

99. Romania relies on a health insurance system to finance the greater part of its health care. This system, introduced in 1998, has been beneficial because it has increased the amount of public spending available to the sector. Around 78 percent of total public expenditure on health comes from the National Health Insurance House (NHIH), while just over 22 percent of expenditures come from other sources. About one-half of the NHIH spending was on hospital care, with drugs and medical supplies represented the second highest expenditure (about one-third of the total and on the rise), whereas primary health care only made up about 6.9 percent of NHIH spending. While almost the entire population of some 21.5 million individuals are entitled to benefits, until 2010 only a quarter paid direct contributions. This will increase by about 3.5 million with the imminent implementation of the new law on co-payments, which will extend the pool of payers by including all pensioners with incomes of over 700 RON a month.

100. The overall insurance contribution rate, taking employers and employees together, is currently 10.7 percent of a contributor's salary**.** It was reduced from 12 percent in 2008. By European standards, this is relatively low, although not the lowest. For example in Germany, the rate is 14.9 percent, in Hungary and Slovenia it is 14 percent, and in the Czech Republic it is 13.5 percent. The health insurance system is based on the collection of payroll deductions from employers and employees. The self-employed and any other citizen can also enroll into the system by paying voluntary contributions. These are set at the same rate as the employee contributions made by the formally employed. Until recently, there were a number of other parallel systems of collection and provision (for example, for employees of the military and the transportation sector). These have now been consolidated such that all formal contributions are collected on behalf of the NHIH by the National Revenue Collection Agency, the ANAF. These monies are then passed on to the NHIH for distribution to its programs. Until 2003, the local NHIH branches undertook this task and were able to track the source of funds and verify exactly which individuals had made their contributions. This was the case until a new automatic mechanism was put in place in February 2011. The new system allows the health sector to obtain information about contributions independently from ANAF.

101. An individual who is not mandated by their employment status to pay the NHIH contribution may choose to pay no contribution at all and take the risk of self-insuring. Currently there are an estimated 10.7 million individuals who are either exempt from payment or who choose not to pay. If they are not part of the formally exempted group (whom all other contributors effectively subsidize), they face the possibility of incurring unexpected and unpredictable costs should they fall ill. The NHIH system currently allows any non-insured person to join or re-join the system by paying six months of backdated contributions. In effect this represents a single payment of 31.2 percent of one month's salary. This policy, which is clearly beneficial for the individual, could lead some groups – especially the young self-employed who are the least likely to use health services – to make a rational and considered choice to risk not making regular contributions but to pay for treatment if and when they need it. Issues of moral hazard and solidarity appear to be in conflict here.

102. In 2010, the ownership of the majority of hospitals was passed to local councils. The hospitals are reimbursed through the NHIH and the Ministry of Health for around 95 percent of their operating costs, but local councils are required to contribute 3 to 5 percent of the running costs of the hospitals in their jurisdictions. Some local councils are making contributions of up to 20 percent.

103. The Ministry of Health funds, and in some instances co-funds with the NHIH, a number of national programs. These are paid for directly from the state budget through the NHIH. In addition to this, the Ministry retains the ownership of some 63 health facilities and is responsible for the operating cost of these units, as already indicated section 2.4. It directly finances medical equipment, resident doctors, and all of the costs of a number of emergency units.

104. Taken together, the state and public funding of the health system constitute around 82 percent of the total reported spending on health care. Private spending – defined for these purposes as any formal co-payment, out-of-pocket payments for care, and treatments, and self-funded private treatments – contribute the remaining 18 percent. In this context, Romania has a low proportion of non-public spending on health. According to trend data reported by the WHO-HFADB, private contributions grew during the late 1990s and peaked at 37.9 percent of all health spending. It has subsequently fallen, more or less linearly, each year until reaching the present level of 18 percent. For comparisons with other selected countries for 2008, see Table 3.2.

Table 3.2: Sources of Health Spending, 2008

Country	Public	Private
Romania	82	18
Bulgaria	58	41
Lithuania	73	27
Poland	72	28
Estonia	73	27
Hungary	71	29
Slovakia	72	28
Average	**71.6**	**28.4**

Source: Eurostat 2010

105. This suggests that Romania is well below other comparable countries in terms of the proportion of income raised from private sources. The EU average in 2008 was 26 percent. The value and, in the very short run, the proportion of public contributions (see the discussion below on co-payments, which are likely to counteract this shift) will increase. This is as the result of the recent decision to include as contributors pensioners with a monthly pension of over 740 RON whereas previously they were exempted. Initial estimates from the NHIH suggest that this move could raise income by 1.2 billion RON.

106. There will be an increase in the amount, and a parallel increase in the share, of private spending following the implementation of the recently passed law on co-payments. Co-payments exist in many health systems and they have been increasingly introduced in recent years in several of the transition states, for example, Estonia (2002), Croatia (2005), Hungary (2007), and the Czech Republic (2008).The actual monetary value of the co-payment will be set by the framework contract (the legal framework for contracts between the Health Insurance House and the providers of health care). The next framework contract will be implemented in April 1, 2011. Co-payments have, broadly, two policy objectives. The first is to raise income, and the second is to structure and reinforce incentives such that patients seek care in the most appropriate setting. Both have been taken into account in these new proposals. A payment will be required for all visits to family doctors, out-patient specialists, and hospitals, as well as for diagnostic tests. Non-emergency ambulance calls will also be charged for.

107. While these charges have not yet (as of February 2011) been formally approved, they seem likely to be set at 5 RON for a GP visit, 10 RON for ambulatory care, and 50 RON for hospital admission. The proposed co-payments for diagnostic and imaging tests range from 1 RON for a simple pathology to 150 RON for an angiogram. There is a large group of socially vulnerable and other individuals who will be exempted from these payments. In total, these exemptions will cover almost 40 percent of the population, including pregnant women, children, students, retired pensioners with an income of less than 740 RON a month, and the unemployed. Additionally, individuals entitled under various specific laws will also be exempt, as will be any individual being treated under the national treatment programs. There will be an annual cap of 600 RON for all individuals, meaning that this is the maximum they can pay in any one year. There has been no published impact assessment of the likely value of funds that this new law will generate.

108. Informal payments are a recognized problem in the health sector. A World Bank study (World Bank, 2005) estimated that informal payments in Romania in 2004 amounted at over EUR 300 million or 41 percent of all cash payments. Informal payments are more common in the case of services provided to hospitalized patients, with some senior doctors receiving several times the national average, while other doctors do not receive any informal payments. In 2008, data from the household budget survey showed that, while 63 percent of the poorest and 88 percent of the richest quintiles of households made out-of-pocket payments for health care, informal payments (in other words, payments made without official receipts or formal accounts) were made by 57.4 percent of the entire population. Of even greater concern is the fact that the proportion of the population reporting making of such payments had increased from 30.5 percent in 2001 (Romanian Academic Society Policy Brief no 32, 2010).This problem is recognized by the Ministry of Health and is openly discussed in documents such as the recent consultation on hospital rationalization.

3.2. Financial Management

109. Until recently, there were three health insurance companies – the National Health Insurance House (NHIH) (at national and county levels), and the Social Health Insurance House of the Defense, Internal Affairs, and Justice Ministries (CASAOPSNAJ), and the Health Insurance House of the Ministry of Transport, Construction, and Tourism (CASMTCS) (at county level). Each used to collect the money due to them, but the Ministry of Health has taken the appropriate step of unifying the collection processes. This move is welcome as it allows the NHIH to implement and apply rules that are transparent, financially sustainable, and equitable from the point of view of ensuring access to medical services for all contributors. However, there appears to be a need for a greater consistency and indeed convergence between the political executive structure – the Ministry of Health – and the main public body that finances the health sector – the NHIH. The MoH will, rightly, set national policies and programs but must have due regard to the impact of these on the finances of the system and on the financial sustainability of the NHIH.

110. The formal budget planning cycle commences in May of each year. All public institutions submit their proposals to the Ministry of Public Finance. Then the budget for the MoH itself is put together, including its operating costs and the financing for special programs and for the operational expenditures of units still within their direct control. The NHIH submits a projected budget for both its income and expenditure. Generally these budgets are based upon historical spending patterns. Following discussions with the MoH, the government ultimately decides and sets the institution's budget, which is then formalized in an annual law passed by Parliament. There is a supplementary procedure that allows for changes (usually additions) to be made the budget through a supplementary ordinance.

111. The law contains a detailed annex of the specific line item budgets of each institution. These are deemed to be absolute limits and are inviolable. They cannot be breached nor can money be moved from one line to another. There are, in the contract framework agreements, clear and punitive penalties for individuals who fail in their financial duties. Essentially this is to not overspend, in any accounting period, the allocated budget. Expenditures by health facilities and hospitals are monitoring by the submission of monthly, quarterly, and annual reports to both the NHIH and the Ministry of Health. It would seem that the formal regulation of the budget along with the imposition of activity caps on providers (to be discussed further in section 4 below) is leading to a false set of monitoring returns. In essence, managers in the system report their activities and expenditures up to the formal cap on each activity but do not report, in the appropriate period, any activities or expenditures that have occurred over and above this cap. Instead, they report them in subsequent periods. Therefore, the system appears to be adhering to tight cash limits whereas the true level of expenditures, as measured by conventional accrual accounting methodologies, is being ignored.

112. There are three groups of decisions that have led to the distorted reporting of the true financial position:

a. The basic rules surrounding the management of budgets mean that the line item financial caps operate not only on individual budget lines but also for individual accounting periods, usually calendar months. This lack of flexibility within the financial year, the inability to move money from one line to another, and the draconian penalties for overspending budgets have resulted in widespread false reporting. Managers do not report any budget over-spending, so the MoH is not made aware of any such problems. Instead, even though the MoH, from experience, knows there may be problems, it reports the figures that it receives from health facility managers and hence ignores the problem. This is compounded by the existence of volume-related norms such as minimum bed occupancy rates.

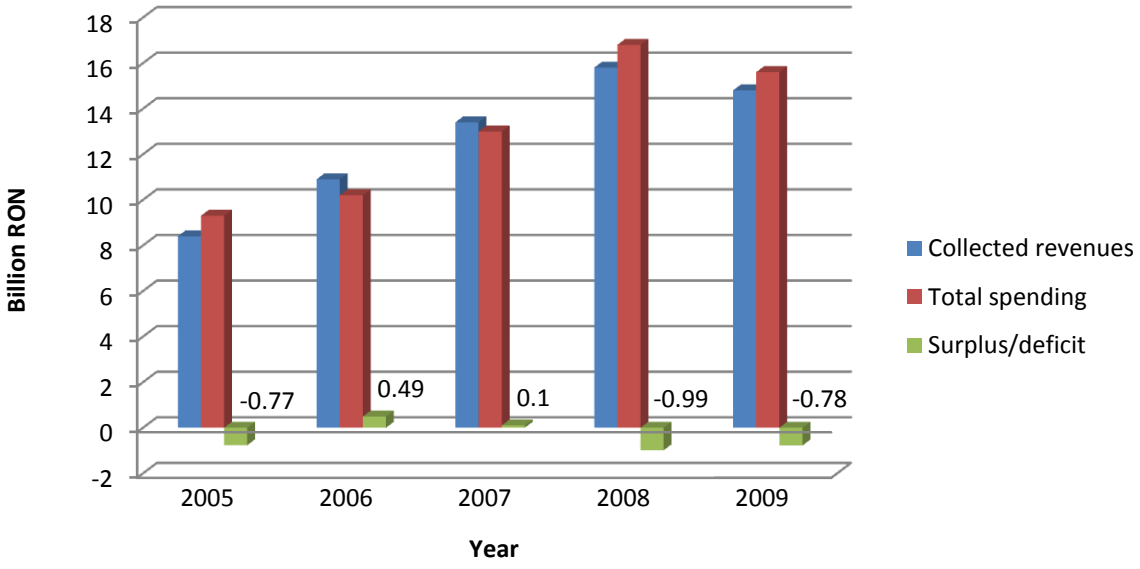
b. The periodic addition of new national programs, often without sufficient additional funding, will clearly lead to overspending by providers and in turn by the NHIH. The addition of new drugs to the approved list makes a further contribution to this pressure.

c. Other factors that exacerbate the situation include opportunistic moves by the government to make the system more affordable to the insured population by reducing the contribution rates, increases in health sector salaries that are well in excess of pay increases in the general economy, and *ad hoc* additions to the list of reimbursable drugs and services, generally without any real assessment of the likely impact on revenues for the NHIH or any compensating financing arrangements.

113. These various issues came together and were manifested very clearly in the government's recent attempts to both recognize and resolve the outstanding problem of accumulated debts in the system. Between 2005 and 2008, public health sector revenues increased by an annual average nominal rate of 23 percent, compared with a 21 percent increase in total public revenues. The funding needs of the health sector were growing at an even faster rate than the increases of money available to it. This was caused by many of the issues discussed above but was significantly aggravated by the increase in the number of and the removal of ceilings on reimbursed medicines. According to the Romanian Academic Society, this led the NHIH to delay paying drug and other suppliers and to accumulate debt. The analysis by the Romanian Academic Society shows the NHIH moving from a small surplus in 2006 and 2007 to growing deficits in 2008 and 2009. Part of the deficit had to be covered by reserves held by the NHIH, which is exactly part of the rationale for holding such reserves. However, the reserves were insufficient to cover the entire deficit. By mid-2010, the NHIH had accumulated debts of 4.6 billion RON, of which 1.1 billion RON were estimated to be arrears. The greater part of the debts were to medicine suppliers.

114. A national budget amendment in August 2010 made 2.96 billion RON available to the NHIH. Of this amount, 1 billion RON was to compensate for a reduction in revenue, mainly a result of reduced contribution rates but also a reflection of the growing level of unemployment in the economy at that time. The additional 1.9 billion RON was set aside to pay the arrears of hospitals and the suppliers of reimbursed medicines. However, after the payment of 1.9 billion RON, the absolute value of recorded arrears decreased by only 600 million RON and debts fell by only 740 million RON. The explanation given by commentators and managers in the field is that the service providers and particularly the medicine suppliers – hospitals and pharmacies – had sold products and services, but had not submitted bills to the county insurance houses because they would have exceeded the annual ceilings allowed in the budgets. Invoices appear to have been literally accumulating in the filing systems of hospitals and pharmacies as they waited to receive sufficient funds to pay them. This trend can be seen in Figure 3.2.

Figure 3.2: The Financial Position of the NHIH, Budget Execution 2005-2009



Source: Romanian Academy Society (2010)

115. In recent years, there has been significant and real growth in the resources available to the health sector. These have exceeded the rate of growth in the general public sector. However, it now finds itself in a position of financial constraints, and indeed with a real risk that expenditures will continue to exceed incomes and budgeted allocations. There are clearly many different reasons for this. Actual accrued expenditures and liabilities are not being recognized, although all of the key actors are aware that they exist. This has been exacerbated by unfunded policy and political initiatives to broaden the range of services, especially drugs, and to reduce contribution rates and increase base pay levels.

116. A realistic and sustainable position must be agreed by all. All accrued expenditure and liabilities must be recorded, and actions taken to keep them within budget. Allowing a degree of flexibility in the movement of money between line items and over accounting periods, while maintaining an overall level of control, would assist in this. Further flexibility in the allocation of money to each line item, and the removal of inappropriate norm driven activity and volume requirements would also need to be considered as a matter of urgency.

117. The main activities of the Ministry of Health (MoH) in the budget execution area include: (i) in-year financial planning and release of funds; (ii) payment processing; (iii) accounting and reporting; (iv) internal financial control; and (v) internal audit.

118. The Budget General Directorate (BGD) within the MoH manages the cash releases and, therefore, plays a key role in budget execution and cash planning in addition to its expenditure programming and budget preparation functions.

119. The BGD includes three departments: (a) financial/ accounting; (b) budget; and (c) medical devices (which is in charge of investments and medical devices). The internal financial preventive control functions are organized within the directorate. The BGD is

headed by the general director, assisted by a deputy general director, reporting to the MoH Minister and to the State Secretary in charge of finance, economics, and budget activities. The staff structure of BGD is more or less appropriate, but the general director position is still vacant, following the recent retirement of the previous one, and there are a couple of staff positions in the financial/ accounting department that are not filled. It is unclear when these staff positions will advertised, given the continuing hiring freeze, which only allows for one position to be advertised for every seven positions that become open (either as staff retire or positions are eliminated).

120. As is the case in other ministries, the current budget structure uses a proper means of accounting and broadly complies with the requirements of the public finance law. However, both the budget's structure limit its usefulness as a tool for strategic resource allocation, effective management, performance measurement, and accountability. The budget is primarily a functional budget, in line with legislation and reporting requirements from the Ministry of Public Finance (MoPF) and consistent with the medium-term framework issued by the MoPF. The use of performance parameters is basic and oriented towards outputs rather than strategic outcomes. Therefore, they contribute very little to enhancing the accountability of health facilities and provide little feedback on their implementation and performance.

121. Although the budget structure applied across the Romanian administration is organized by functions rather than by a program budgets, a program budget structure is annexed to the main budget document. This is meant to facilitate the use of the budget as a strategic funding allocation resource. The Ministry of Health has its budget approved based on programs, attached as annexes, however, the management and regular monitoring of the budget execution is done primarily based on chapters, titles and lines, rather than based on programs, as it would be the case in a full program budgeting approach.

122. Ultimately, the Ministry of Health would benefit from a shift to a full program budgeting approach. This, together with a reformed drug formulation process, would make more strategic and efficient use of scarce resources by enhancing strategic allocations and promoting the decentralization of decision-making powers. It would also create more accountability, foster financial monitoring and feedback, and inform the formulation of the next budget. Full program budgeting would allow the ministry to match its budget to its priorities. It would define objectives for each program, and the budget would be allocated according to measurable objectives. It would take into consideration the timing of program implementation and would identify the departments or agencies responsible for budget implementation and results. A budget fully based on programs would also enable the identification of strategic tradeoffs. Rather than receiving requests from its constituent agencies and trying to divide up scarce resources as fairly as possible, the ministry's policy unit would set clear priority guidelines on a yearly basis within a continuously updated medium-term expenditure framework. These priority guidelines would in turn empower each managing unit to design and be accountable for their own budget. A working committee of the ministry's leadership would then make final budgetary decisions.

123. Some other challenges to budget formulation and execution are clearly cross-sectoral in nature and would require an amendment to laws or regulations. However, the ministry is already in a position to use a number of internal budget management tools within the current legal framework. Rather than wait for changes to the public finance law, the ministry could start putting in place a process of program budgeting that would then provide the basis for a functional budget to be presented to the MoPF. This budget would include the ministry's strategic priorities, outcome indicators, and a detailed budget and headcount and would identify which department is in charge of implementation of each budget line. It would enable the ministry to produce clear and regular updates not only on sectoral indicators but also on the progress to achieve the goals.

In-year Financial Planning and Release of Funds in the MOH

124. *Allotment Procedure***.** After the approval of the annual budget law, the main spending authorities (*ordonatori*) draft quarterly budget implementation plans that are then reviewed by the BGD and approved by the Minister of Health. The main spending authorities include presidents of constituent agencies and the heads of other public authorities and specialized agencies. Once the quarterly budget implementation plans are approved, the *ordonatori* distribute the approved budgetary credits for their own budget and for their constituent entities or units, whose managers are designated as secondary or tertiary spending authorities. Then the secondary spending authorities distribute the approved budgetary credits for their own budgets and for their own constituent tertiary spending authorities.

125. To ensure prudent budget execution, the main spending authorities are required to hold 10 percent of their approved funding as a reserve, with the exception of personnel expenditures and funds related to external liabilities, which are entirely distributed. This reserve is distributed during the second half of the year.

126. *Cash Releases*. Cash is released through monthly "credit opening" (*deschidere de credit*). The main spending authorities each month present several requests to the BGD for cash releases, which should be in line with the quarterly spending limit. These requests are accompanied by a note giving details of operations that will be financed by these cash releases. After the BGD reviews these requests, they authorize the "credit openings" are authorized and release the cash to the main spending authorities. These "credit openings" are then recorded in the Treasury payment system. Then, the authorized cash releases are distributed within the main spending units.

127. The BGD exercises a tight control over credit releases through the combination of quarterly cash limits and monthly credit opening. These controls may help to keep cash flow under control. However, this process is time-consuming and may create issues if cash releases do not take into account the payment schedule related to the existing commitments or if the cash releases are less than requested because of the limited availability of overall funds.

Payment Processing in the MoH

128. An effective Treasury Single Account system is in place. All cash transactions are channeled through the Treasury account at the central bank, with the exceptions of transactions in foreign currency, which are processed by commercial banks. The accounts of the MoH and its constituent entities are kept at the Treasury. Payments are made to these accounts through the Treasury information system, generally within one day, and the MoH and its constituent entities receive daily account statements from the Treasury.

129. Spending authorities have to bring payment orders (*ordonantare*) to the Treasury branch offices. This procedure, although required by the Law on Public Finance (500/2002), involves significant paperwork. Up until now, the lack of legal authorization for electronic signatures has made it impossible to automate the transmission of payment orders from the spending authorities to the Treasury branch offices. At the Treasury branch offices, the payment orders are generally scanned (a payment order includes a bar code) or are manually processed to be registered in the Treasury database.

130. *Accounting and Reporting.* The main, secondary, and tertiary spending authorities of the state budget and other government entities use the accrual accounting method (for example, they account for the depreciation of fixed assets). There is a unified chart of account for the central and local government units. Since 2006, the government has adopted 11 IPSAS (International Public Sector Accounting Standards) accrual accounting standards (among a total of 31 standards). Consolidating these standards and implementing further IPSAS standards will require further training and close supervision of financial staff within ministries. This issue is being addressed separately by the World Bank, through a technical assistance with the Ministry of Public Finance (MoPF).

131. The MoH and the main spending authorities prepare several quarterly and annual financial statements, which include, inter alia: a balance sheet that shows assets and liabilities, the patrimonial results account, cash flow statement, the budget execution accounts showing all transactions made in the current period, annexes to the financial statements and explanatory notes.

132. The MoH consolidates these financial statements and then they are entered in a dedicated software system at the Public Institutions Accounting Methodology General Directorate (PIAMGD) within the MoPF. Quarterly reports are transmitted to the PIAMGD within 40 days from the end of the quarter under review. Annual reports are transmitted within 50 days after the year end. In parallel, the Treasury Information System is able to produce budget execution reports on a cash basis in almost real time.

133. The financial statements are prepared in accordance with EUROSTAT requirements and partially with IPSAS, as detailed above. However, the time needed to access data on commitments is significant. Data on commitments made in the first month of a quarter are available only three and a half to four months after the end of that month. This causes the following problems:

- Appropriations that are already committed have sometimes been cut during budget revisions because of this slow commitment data process. This leads to the accumulation of arrears.

- Reporting commitments in a timely manner together with sanctions for over-committing and off-budget commitments will improve fiscal discipline.

- For cash planning to be more effective, a shorter reporting period is needed for commitments and for reporting the payment schedule associated with the commitments.

- The MoH's financial information software systems are geared mainly towards accounting and reporting and rely heavily on manual inputs by staff. The transfer of data from the MoH software into the format requested by MoPF's PIAMGD is done manually based on the MoH trial balance, which takes some time and could be prone to errors.

134. *Financial Accounting and Reporting Systems.* The MoH uses a comprehensive software application for its financial management functions. The main system is the Softeh financial management software developed by a Romanian firm, which has several standard modules including accounting, fixed assets, inventories, and salaries. The MoH has a maintenance contract with the software firm for technical support to include all legislative and other updates in the software on a timely basis. A number of software improvements are planned, such as the implementation of the MoH financial preventive control module ("ALOP"). The MoH also uses Excel extensively for reporting and analyzing data. A number of hardware problems have been reported, including some network and server failures, especially during busy quarterly reporting times. Because the system centralizes in Bucharest all the data from the sub-units across the country, a more powerful server is needed, as is sufficient bandwidth capacity to cover the ministry's financial management functions.

135. The MoH would benefit from including other critical functions in its software systems, such as planning and budgeting (currently only kept in Excel), procurement and the automation of the reporting function to MoPF.

136. *Budget Execution Financial Controls.* Law No 500 on Public Finance defines the four stages of budget execution (according to ALOP, these are commitment, verification, payment order, and payment) and stresses the principle of the separation of duties. There is a ROF in place, but this mostly consists of descriptions of the ministry's organization, structure, main functional processes, and staff job descriptions. However, the MoH would best develop written internal control procedures customized to its specific activities. We also recommend that the BGD updates and finalizes all financial internal control procedures in the short term, say by December 31, 2011. The system of preventive (*ex-ante*) financial controls that exist in the MoH is as follows:

- Internal financial controllers who exercise *ex-ante* financial control over all expenditure transactions (commitments, cash opening and payment orders or *ordonantare*), which are regulated by the ministry's own financial preventive control rules.

- The MoH is subject to monitoring by financial controllers from the MoPF's Central Harmonization Unit (CHU) for Financial Management and Control. Thus, the MoH is one step ahead of several other line ministries in having fewer of its transactions submitted to the double visa system, consisting of both the visa of its own internal preventive financial controller and the visa of the MoPF's financial controller.

137. The MoPF intends to phase out its financial controls within line ministries by December 2012. After this date, only financial controllers reporting to line ministers will have the responsibility for carrying out preventive controls. This is a desirable measure but may require further actions to strengthen internal control within line ministries, which are currently preparing a work program to make this happen. The MoPF's CHU for Financial Management and Control will have to review and monitor these work programs. As of March 2011, the MoH is still being monitored by the MoPF's financial controller.

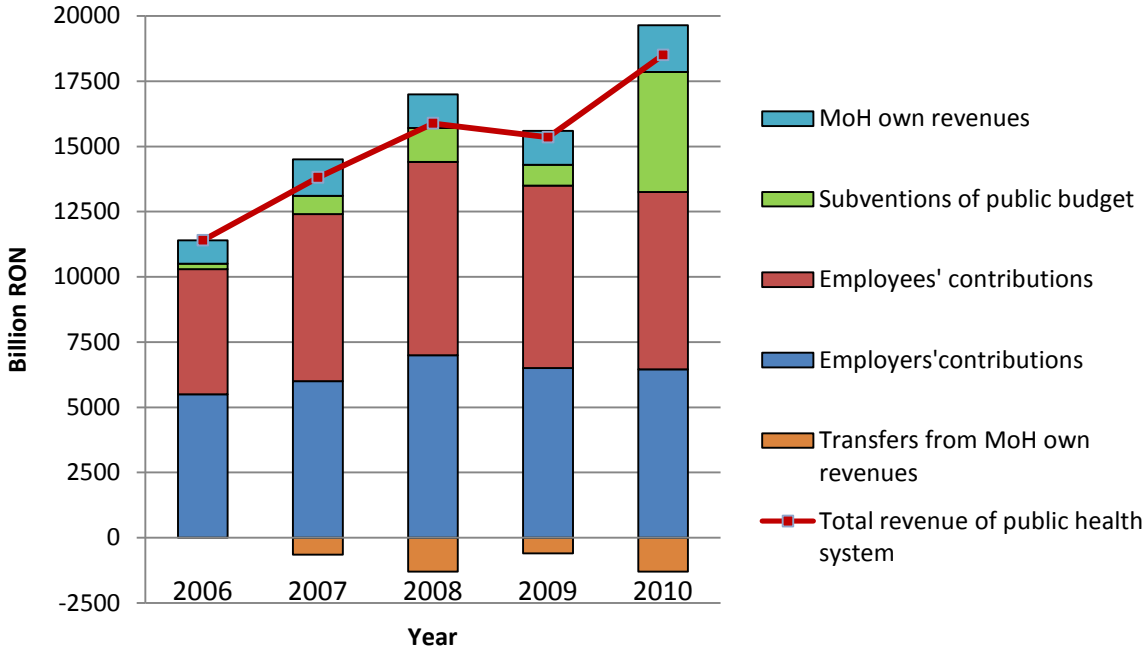
138. *Internal Audit.* The internal audit unit within the MoH was established in accordance with the Law on Public Internal Audit (672/2002). The unit is monitored by the MoPF's CHU for Internal Audit, which reviews the internal audit work plan and methodology, carries out training activities, and participates in sectoral audits involving several ministries.

139. The internal audit department in the MoH is facing the several issues that are common to the whole country. For example, internal audits have generally been given a low profile across the government (the unit in the MoH is currently organized as a department**,** even though it was a directorate in the past). Also, the unit's work is negatively affected by frequent changes in the management of the ministry, excessive *ad hoc* internal audit missions that undermine the annual work plan, severe staff shortages (the unit currently employs only eight internal auditors, reduced from a total of 16 in the past), reduced training budgets that impede its ability to ensure the staff's professional development, insufficient equipment (no laptops at all), and the extensive time required to implement the recommendations following the internal audit findings. above all, it suffer from the limited interest of the MoH management in internal audit findings.

3.3. Risk Pools and Associated Expenditures

140. The two most significant contributors to health care financing are the Ministry of Health, through its own finances and contributions to national health programs, and the NHIH through the pooling of contributions from its various funders. When we examined the financing of the NHIH, we found that, in the five years between 2006 and 2010, it increased its available revenues by some 60 percent in nominal terms. In 2010, its spending consisted of 36 percent from employers' contributions, 36 percent from employees, 24 percent from other public budgets, and 10 percent from its own revenues. Our analysis of the trends in financing confirmed what we expected to find, which was that employees contributions have fallen as a result of the rate cut and of reduced overall employment levels while support from other state budgets has increased, particularly in 2010. In many ways 2010 was an atypical year as the government made a supplementary allocation of 1.8 billion RON to deal with the problem of arrears and deficits. This trend is shown in Figure 3.3.

Figure 3.3: NHIH Financing Trends



Source: Romanian Academic Society policy note No 32(2010)

141. It is possibly more instructive to look at trends in terms of the proportion of total spending devoted to each program area. Table 3.3 does this.

Table 3.3: NHIH Expenditure Trends as a Percentage of the Budget

Program	2005	2006	2007	2008	2009	2010	Budget 2011
Total expenditures	**108.06**	**94.55**	**98.31**	**105.42**	**104.45**	**101.44**	**100**
Primary care	4.95	4.77	6.08	9.23	7.70	6.68	6.91
Outpatient / ambulatory	2.70	2.70	2.69	2.48	2.24	1.76	2.01
Laboratories & imaging	2.37	2.30	3.45	3.80	2.25	1.89	1.93
Dental care	0.66	0.64	0.55	0.50	0.44	0.36	0.38
Rehabilitation services	0.63	0.51	0.61	0.57	0.54	0.45	0.47
Hospitals	51.77	51.18	48.70	47.67	51.02	51.56	44.24
National health programs	8.97	11.90	10.68	10.73	13.97	12.35	15.31
Pharmaceuticals	23.15	20.71	21.30	19.61	15.20	18.01	20.07
Medical prostheses	0.51	0.53	0.68	0.70	0.66	0.53	0.72
Ambulances	2.95	2.98	3.00	3.52	4.31	3.97	4.21
Home care	0.03	0.05	0.08	0.12	0.13	0.17	0.21
Services in EU countries	0.00	0.00	0.00	0.09	0.13	0.06	0.08
Administration	1.31	1.73	2.22	1.58	1.48	2.28	2.43
EU - Project Funds	0.00	0.00	0.00	0.00	0.00	0.00	1.04
Assistance Expenses	0.00	4.98	4.64	4.85	6.43	6.30	6.83
Reserve Fund	0.90	1.05	0.97	0.88	0.92	0.00	0.00
Surplus/Deficit	**-8.35**	**5.01**	**0.83**	**-6.30**	**-5.46**	**-1.51**	**0.00**

Source: NHIH data provided in February 2011
Note: In 2008, 2009, and 2010, this exceeds 100% as a deficit was incurred.

142. The main conclusions that can be drawn from this are as follows:

a. The NHIH has oscillated between achieving an annual surplus and a deficit. The actual proportionate deficit was greatest in 2005 at just over 8 percent. In 2006 and 2007, a surplus was achieved, but it incurred further deficits in 2008 and 2009, which were paid off, to some extent, by additional funding in 2010. So a deficit is not a new phenomenon.

b. Spending on primary care is comparatively low to other EU countries but has grown more or less consistently as a share of the total after allowing for the non-recurring expenses of the screening program in 2008 and 2009.

c. Outpatient expenditure has declined as a percentage of total spending as have ambulatory imaging and laboratory expenses.

d. Hospital expenditures have been more or less stable at around 51.5 percent of all spending. The fall in 2008-09 was the consequence of the addition of the screening program in primary care rather than of a fall in overall spending.

e. Pharmaceutical expenditures have been the most variable component of the NHIH spending. These have varied from a high of 23.15 percent to a low of 15.2 percent. Spending on pharmaceuticals in 2011 is budgeted to be 20.7 percent, which is slightly higher than the six-year trend average of 19.96 percent.

f. Administration has grown steadily from 1.3 percent to 2.43 percent, but this is low compared with administrative costs in other systems.

g. The significant gainers, in terms of share of total spending, have been the national health programs. They have grown from just under 9 percent of the total to an expected 15.31 percent in 2011. These are mainly hospital-based interventional programs targeted to small populations of patients. Trends and details are given in Table 3.4 below.

Table 3.4: National Health Programs (million RON)

National Health Programs	2005	2006	2007	2008	2009	2010	Budget 2011
HIV / AIDS	108.7	118.4	122.6	137.6	147.5	179.2	200.0
TB	12.5	13.2	13.4	14.8	14.9	15.4	15.0
Oncology	213.3	290.2	361.8	579.0	764.0	689.9	762.0
Multiple sclerosis	49.5	54.6	51.7	67.7	65.5	47.3	0.0
Diabetes	193.7	211.7	232.8	309.1	360.6	379.1	323.7
Rare diseases and sepsis	5.0	9.8	17.9	18.9	22.4	29.5	221.4
Endocrinology	4.7	4.9	5.1	7.6	5.3	4.3	4.3
Organ, tissue, and cells transplants	0.4	17.1	22.8	41.4	42.6	40.9	58.8
Liver failure intensive care		0.0	0.0	0.0	0.0	1.3	1.7
Cardiovascular diseases	35.0	40.4	50.1	61.6	55.2	34.7	35.3
National Orthopedic program	19.2	19.4	36.2	33.2	30.9	26.8	30.0
Implanted prosthesis		0.0	0.0	4.5	4.3	3.6	5.6
Mental health	0.6					0.0	0.0
Chronic kidney failure	178.5	373.1	397.2	418.0	491.3	582.7	563.0
Cancer							80.5
All programs	**821.1**	**1,152.9**	**1,311.7**	**1,693.3**	**2,004.4**	**2,034.8**	**2,364.5**

Source: NHIH data provided in February 2011

143. The Ministry of Health's own budget has grown by a much smaller amount and rate. The available figures show this now be some 2.13 billion RON. Of this, some 632 million RON is spent on the staff, goods, and services needed to run the ministry, and 1.25 million RON is transferred to other public entities, mainly the NHIH and the national health programs. The most significant of the remaining allocations is allocated to capital expenditures, totaling some 49 million RON.

144. The draft framework contract for 2011 does make some significant changes to the structure of the system. It proposes that there be an overall reduction in the NHIH budget, though this may be no more than the withdrawal of the non-recurring funds made available for the payment of debt and arrears in 2010. The framework recommends the introduction of indicative budgets for prescriptions by all medical services suppliers (GPs, specialist services in outpatient care, and hospitals) and for a cap on the contract value of medicines. There are proposals to enforce a reduction in the number of hospital bed days. Taken together, it is estimated that expenditures could fall by some 20 percent on drugs, by 7.4 percent on hospital services, and by 7 percent on national programs in 2011.

145. The recent decentralization of authority over hospitals has clearly put a financial burden on local governments. They are now liable for the maintenance and repair of the

fabric of buildings and for the provision of utilities. It is unclear if they will adopt a consistent approach to this new responsibility.

3.4. Provider Payments

146. Primary care providers are funded by a combination of weighted capitation payments together with a fee for service for specific activities. This combination of payment types is common in many health systems that are characterized by a comprehensive, publicly funded system of primary care. The capitalization element protects all citizens and gives them a guarantee of access to primary care. However, it also encourages physicians to maximize the number of their patients on the registered list, which can then lead to the physicians being overwhelmed by the sheer volume of patients seeking their services. To counteract this, the MoH is overseeing a staged reduction in the value of additional patients added to the list beyond approximately 1,900 patients per doctor.

147. The fee-for-service (FFS) element gives doctors an incentive to provide specific services. It can be a useful tool for governments to encourage, or indeed discourage, certain services and treatments by adjusting the level of the fee that it pays doctors for each particular service. Some fees are paid for direct personal ("curative") care, but this can give doctors a financial incentive to reduce or ignore the preventative services that are provided under the capitation element of their payment. The current benefits arrangements allow primary care doctors to refer patients to outpatients and hospital specialists through a structured, formally documented referral system. However, there is no financial incentive in the system to encourage the practitioner not to refer patients but instead to provide them with a fuller, primary care package of services.

148. The implicit cap on the number of patients to be paid for in a working day imposed by the Framework Contract effectively mandates a daily workload of around 28 patient consultations for each physician. For any patients over that number, there is a sliding scale of reductions. While this has a potentially positive dynamic in increasing the amount of time doctors can spend with their patients (doctors currently allocate 15 minutes for each consultation), in practice this is not necessary. On average patients do not require 15 minutes per consultation, and doctors in other countries with established family doctor systems rarely have consultations of more than 10 minutes. This leaves practitioners with two choices. Either they limit their working day to the time needed to treat 28 patients or they see more patients even though they feel that they are not being paid fairly for this additional activity. Each doctor's reaction will depend upon his or her commitment and benevolence, but the system should not rely upon such intangible factors to regulate service delivery.

149. Doctors receive a number of staged payments depending on their academic qualifications and the number of years they have been practicing. These payments are not conditional on their relative skills, competency, or performance.

150. Outpatient specialist services are a generic entitlement within the health insurance benefits package. Once referred to these services by their family doctor, a patient may receive up to three consultations for each spell of treatment. Service can only be received if the patient has a formally documented transfer form issued by the family doctor. The form is the prime record required by the NHIH to pay the specialist doctor. The payment for outpatient specialists is based upon a combination of points for consultants and for services performed on a fee-for-service basis. There is then a wide range of diagnostic, therapeutic, and curative services that have specific point values and may be specific to certain clinical specialties. Point values are also attributed to patients who have no referral forms but are deemed to be emergency cases.

151. Specialists are paid on the basis of a monetary value affected to each point. There is a cap placed upon the number of points that a specialist can accrue in a working day. As with family doctors, this assumes a seven-hour working day and that each patient is allocated a 15-minute consultation. Payments are capped at an average of 28 payment consultations for general patients, and 14 for a selected group of patients with more severe illnesses. There is also a seniority payment element for each specialist.

152. Para-clinical services such as pathology and diagnostic imaging are included in the broad system of fee-for-service reimbursement. Patients access these services through their family doctor or through the referrals transfer process. The patient can take a referral transfer from this to their provider of choice who is then paid a set fee per procedure in return for providing the service. Payment is based on the negotiated tariff for the service. Payment for medical laboratory services is based on different criteria. Thirty-five percent of the payment is based upon very specific definitions of the range of analysis undertaken, the age of equipment, and the speed of analysis. Another 35 percent of payment is based on quality criteria based on ISO standards (this is the only service in which an explicit quality element is formally recognized). A further 25 percent is based upon a relative weighing score for the nature of analysis, and the remaining 5 percent is paid on the basis of addressability.

153. The benefits package currently includes some traditional services such as acupuncture, homeopathy, and physiotherapy services. There are proposals to remove these from the package as there is no evidence to support their use. This is a logical thing to do.

154. Hospitals are primarily financed by a combination of case mix adjusted payments (diagnosis-related groups – DRG) from the NHIH and direct budget allocations from the central and local governments. These additional payments from the central and local governments fund specific activities such as emergency care, some care related to specific illnesses (through the national health programs or national treatment programs), and, for some hospitals, teaching and research activities. Capital investments are funded from a separate Ministry of Health budget. Routine maintenance and utilities are funded by the responsible local government. In addition, hospitals have the right to retain the income that they generate through co-payments and by providing services to private sector individuals and enterprises.

155. The DRG approach to payment was introduced in Romania in 2004. At that time, it was decided to use the Australian version of DRGs (A-DRG). This is an approach that is used as a starting point by some other European countries. All discharged patients are retrospectively assigned to a DRG that reflects their clinical treatment. In 2004, there was no adequate database on the costs of DRGs in Romania, and so the cost weights of the DRGs as applied in Australia were used to assess the payments due to hospitals. This means that the relative costs, though not the absolute costs, of treatments for individual DRGs in Romania are the same as in Australia. While it was recognized that this was not always the case, it did give a reasonable starting point for using case-based payments.

156. In general terms, a patient who requires a hospital stay in excess of 12 hours is counted as an inpatient and is sometimes termed as a continuous hospitalization case. While most countries using DRG systems do have some delineation between short-stay and long-stay patients, 12 hours is on the short side. A payment process based upon the principles of prospective payment systems (DRGs) is used. Analysis of the national DRG data set indicates that, in 2006, 9 of the 20 most frequently observed DRGs, by volume of activity, were those that in other countries are routinely treated as ambulatory or same day patients. In Romania, these patients accounted for 15 percent of all inpatient hospital cases. They could and should be treated in non-hospital settings, which will be safer, cheaper, and more convenient for the patient (see also paragraph 84 above).

157. The NHIH negotiates an annual contract for services with each hospital. This contract specifies the number of patients that the hospital can be paid for in terms of the relative value of each patient. It is calculated on the basis of:

a. An estimated number of patients whom the hospital will discharge. This estimate is agreed through negotiation between the NHIH and the hospitals. It is based upon: (i) a 70 percent bed occupancy rate for surgical cases and (ii) the actual number of non-surgical admissions in the previous year minus the number of unnecessary admissions.

b. A case mix index for the hospital. This is an index of the severity of the cases being treated by the hospital compared with the severity of cases in the whole country. An index of more than 1.00 indicates that the average patient at the hospital is more expensive than the national average.

c. A detailed tariff per patient based upon the diagnostic-related group (DRG) to which each patient is allocated. DRGs are an internationally recognized system that groups patients into groups according to their clinical conditions and to how much it costs to treat them.

158. In 2011 there has been a significant technical improvement in the process. From now on, the NHIH will use Romanian modifications to the A-DRG and Romanian cost weights to calculate its payments to hospitals. The NHIH will estimate the likely number of each hospital’s activities for each DRG. It will then apply the Romanian cost weights to these numbers and set an annual budget based upon the actual mix and severity of cases in the

hospital. It will use a national price for each DRG for the majority of hospitals, and thus the basic incentive for adopting international DRG systems will begin to come into effect. This is to make payments based on a "fair" price rather than on the hospital's own costs, thus encouraging hospitals to become more efficient and cost-effective. The NHIH agrees an annual budget based on this calculation. It then receives information on the actual case mix, which is routinely verified by the Institute of Management. If the case mix value is less than the budget, then the NHIH reduces its payment to the hospital to the actual value due. If it exceeds the value, then NHIH may pay that amount if its funds allow. This reconciliation is done on a quarterly basis.

159. Because of their initial high costs, some 50 or so hospitals do receive a payment that is higher than the national rate, while 350 or so are paid at the national rate. There is a program of timed transition to bring the others to the national rate, and again this is a process adopted by most European countries who have introduced DRG systems, including Germany, France, and England.

160. Progress has been made on refining the DRG system consistent with Romanian health policy and international practice. However, there are still some areas where further refinement would increase the chances of achieving the country's policy objectives. These refinements might include the introduction of DRG payments for out-patient services and payment-structured incentives to encourage the transfer of appropriate treatments and patients to non-hospital settings. Further development of the Romanian DRG variations would also be helpful, especially to allow for complications and co-morbidities that are not well recognized in the current process. Lastly, it would be helpful to define those DRGs for which short, same day, or out-patient procedures are more appropriate than inpatient hospital-based treatments.

161. There are rigid rules on how the budget can be applied. For example, the number of personnel allowed for each hospital relates to the characteristics of the hospital structure rather than to the activities that are performed within the hospital. Personnel costs (salaries) are set by law, and they represent over 70 percent of total costs in the majority of hospitals. This prevents hospital managers from being able to allocate the money in their total budget according to the hospital's specific needs (see also paragraph 86 above).

162. Hospitals providing psychiatric and palliative care are also paid on the basis of tariff-like processes.

163. Capital investments are funded from a separate and self-contained MoH budget. In addition, hospitals have the right to retain the income that they receive from co-payments and from providing services to private sector individuals and enterprises.

3.5. Financial Incentives

164. While the revenue payment processes are, in themselves, reasonably rational, the regulations and constraints placed on the system by the various laws and regulations leads to some inefficiencies and inappropriate incentives at the various levels of the system.

Financial Incentives in Primary Care

a) The application of the activity caps through the points payment system leads to an inefficient use of doctors' time. They clearly have surplus time that could be used to treat more patients. Alternatively it might be possible to reduce the number of doctors required to provide family doctor services.

b) To encourage clinicians to practice in rural areas, it may be appropriate to give them more incentives to do so.

c) The balance between capitation and fees for service is to be amended in 2011, which will raise the fee-for-service quotient to 50 percent of doctors' incomes. This will encourage patients to seek care in the primary care setting, which is desirable. However, the efficacy and effectiveness of these newly delivered services must be reviewed and audited to ensure that priority diseases and risk factors are being addressed, that all population groups are being covered, and that the kinds of care being provided are appropriate.

Financial Incentives in Outpatient Services

a) As with family doctors, the points and payment cap on patients leads to inefficient use of specialists' time.

b) There is no obvious incentive for specialists to avoid referring patients to hospitals.

c) There is little harmonization of the funding of capital and revenue expenditures. Procurements of equipment at the national level may not meet priority needs as they are perceived at the practitioner level.

Financial Incentives in Hospital Services

a) The current DRG system does not adequately differentiate between services that can and should be provided on an ambulatory or short-stay basis.

b) The use of the line item budgets and the lack of end of year flexibility to allow surpluses or deficits to be carried over into the following year are preventing the efficient use of funds.

c) The current provision of hospital care may be creating perverse incentives in the system against vertical equity (against the more vulnerable patient groups). Hospital drugs are provided free, whereas a fee is charged for drugs dispensed at the primary care level.

165. There is a compelling need to introduce some performance-related element into all sectors of the system. These have been developed in countries where tariff and case-mix systems have already been implemented, and where there is a history of performance-related payments to family doctors. However, indicators that are aimed at delivering specific improvements in quality are still being developed in Romania.

166. Quality is difficult to define and difficult to measure. Nevertheless, there are some recognized indicators and proxy indicators that have been developed and used to encourage and reinforce quality in other health care systems. Many countries have introduced Hospitals Pay for Performance systems, and these have been reviewed in academic journals.[43] These initiatives increase or reduce the payment made to hospitals based upon their performance measured according to a predetermined and measurable set of indicators.

167. There are also models that have been successfully developed to measure and reward performance and quality in primary care. Primary care physicians are used to fee-for-service payments. The addition of indicators that measure or reward quality is acceptable to them, provided that the financial incentive is appropriate. One example of this is the system known as the Quality and Outcomes Framework (QUOF) that was recently introduced in England.

3.6. Recommendations and Conclusions

168. **Clarifying the health financing strategy.** Two different views coexist among policymakers in Romania concerning the problems of financing in the health sector. The two views derive from different diagnostics about the evolution of health financing in recent years and have resulted in a lack of trust and dialogue between the two groups. The first view – held by officials from the finance authorities – is that the health sector has no control over its spending. Public expenditures have significantly expanded in recent years, yet when the financial crisis hit Romania, it was very difficult to cut expenditures in the health sector because it had incurred significant hidden spending that became arrears and had to be covered by the central government. According to this view, the health sector refuses to recognize financial limits consistent with the limitations of the government budget.

169. The second view – favored by officials from the health sector – is that the health sector has suffered from the arbitrary changing of rules by the financial authorities. The proponents of this view claim that the post-communist reform of the health sector created a system of social health insurance financed by a hypothecated payroll tax, approved by

[43] See for example, Felt-Lisks and M.Laschomber , Pay for Performance: Are hospitals Ready?, Mathematica 4, November 2006 , or Lindenauer M.d et al, Public reporting and Pay for Performance in hospital; quality improvement, New England Journal of Medicine, Volume 356:486-496.

parliament independently from the rest of the public budget, that was intended to be a permanent income source for the sector. Yet, the percentage of the payroll tax assigned to the health sector was cut significantly during the years of economic expansion and has not been restored to its previous level during the economic contraction, resulting in a loss in the share of total government revenue assigned to the health sector. Health sector officials also claim that decisions (involving the elimination of caps on ambulatory drugs and a steep increase in wages) taken outside the health sector during 2008 in the run up to the latest elections were not accompanied by a corresponding increase in the sector's revenues, thus forcing it into an unsustainable position that was responsible for the development of arrears. According to this view, the health sector is entitled to a significant increase in its budget to compensate for these decisions and to enable Romania to offer its citizens a level of health care that corresponds with its status as a member of the EU.

170. The coexistence of these two opposing views and the significant lack of trust on both sides make the dialogue very difficult. Specifically, both sides agree that the health sector is underfinanced, but they fail to agree on a solution. For the MoH, the solution mainly consists of a budget increase, whereas the financial authorities prefer to encourage an increase in private financing. A long term strategy is needed for the health sector; should combine an action plan to increase efficiency in the sector, and a measured increase in public financing for the sector with a strong impulse to increase private financing including the development of private insurance for those who can afford and compensatory measures for the poor should also be established.

171. **Strengthening financial controls.** In the short term, there is a need for more efficient control over expenditures. In recent months, the government has submitted legislation establishing a copayment system to Parliament, reduced the number of contracted hospital inpatients by 10 percent from the 2010 levels, reduced the price markup paid by the government for drugs in the national health programs (list C2), and reduced the share of per capita reimbursement to doctors from 70 to 50 percent. The government is implementing a transparent and integrated IT system in the health sector to monitor and increase efficiency of health spending, and a significant number of questionable claims have already been uncovered. In addition, the government is also eliminating mandatory contracting with all hospitals, allowing competitive contracting with selected hospitals to ensure transparency and oversight, providing indicative caps for quarterly services contracted with hospitals and physicians with incentives for physicians to remain within those ceilings, and revising the list of compensated and free drugs approved in 2008 to reduce the number of these drugs and wherever possible to move towards generics.

172. **Increasing equity in financing.** Romania has a significant problem of poverty and equity. In 2008, it ranked second among the EU countries in terms of the percentage of the population at risk of poverty with 23 percent, just ahead of Latvia with 26 percent (Eurostat). The poor are defined as the proportion of the population earning less than 60 percent of the national median income per equivalent adult. Given this extensive inequality, it would be desirable for the government to develop specific policies to ensure that the poor have access to health care. In theory, Romania provides such protection by exempting those who are

registered in the minimum income program from having to pay contributions and copayments. In practice, this mechanism is insufficient as our analysis has shown that the poor face significant problems in accessing health care, possibly related to they cannot afford to make informal payments to providers. Our analysis also suggests that much of the subsidy provided by the government mainly benefits of the richer segments of the population who could probably afford private insurance. Since legal exemptions are not effective given the need to increase incentives for providers and given the existence of large informal payments, the government could consider improving the targeting of its subsidies in ways that expand the access of the poor to health care services. .

173. **Aligning stated strategy with payment systems.** The stated government policy is to increase allocative efficiency in the health sector by reducing the use of inpatient services, increasing the use of ambulatory services, and by restricting the use of complex (and expensive) facilities exclusively for complex activities. In practice, the current use of payment systems creates financial incentives that are contrary to the stated policy. These short-term measures move in the desired direction, but these need to be complemented (and in the longer run replaced) by price signals aligned with government policy.

174. Some observers of the Romanian health system have criticized the use of "Australian weights" in the DRG system used in Romania. While we agree that this has been a problem, we think that this is a minor inconvenience compared with much more serious problems discussed in this chapter. We are encouraged by recent developments and support the government in taking an incremental approach to adopting Romanian-based metrics.

175. **Maintaining the current level of autonomy of the NHI**. Observers of the health sector in Romania have often remarked on the fragmentation of the system. Our review concludes that the degree of fragmentation is not substantial. There are some small subsystems (for example, in the transport sector and the armed forces), but these increasingly channel their payments through the NHIH The greatest source of tension that we observed was between the Ministry of Health and the NHI. In our view, much of the tension between these institutions exists by design and is a difficult but necessary feature of most systems that separate provision from financing. There has been some discussion about reducing the autonomy of the NHI by subordinating it to the MoH. We would not favor such a change as it is essential to maintain the independence of the NHI to make financial decisions without reference to the needs of the providers. We would, however, recommend that the criteria governing the accountability of the NHI could be made explicit and monitored according to objective indicators. Clearly, it needs to be responsible for keeping its spending within budget. Beyond that however – is the NHI succeeding at increasing access, strengthening financial protection, and improving the quality of care? Very importantly, the NHI could report specifically on how well it is increasing access, especially for the poor. Without this change in accountability, the NHI runs the danger of simply becoming an administrative payer, a function that could equally well be done by the MoPF.

4. KEY ISSUES IN STEWARDSHIP IN ROMANIA

4.1. The Stewardship of Health in Romania

176. This Health Sector Functional Review is a part of the broader strategic and functional review of Romania's central public administration being undertaken by the World Bank on behalf of the European Community and the Government of Romania. This part of the review includes an assessment of stewardship as a key health system function (as specified in the Tallinn Charter of 2008)[44] and should be taken together with the sections on service provision, financing, and human resources management.

177. The stewardship of health (and the related concept of governance) are critical elements for the future of health in any society, in the sense that they refer to the rules followed by society in the pursuit of health. Stewardship is the name originally given by the World Health Organization to the "function of government responsible for the welfare of the population, concerned with the trust and legitimacy with which its activities are viewed by the citizenry,"[45] although most agencies use the name now. More recently it has been defined as "the role of the government in health and its relation to other stakeholders whose activities impact on health."[46] All EU Members have stated in the 2008 Tallinn Charter that:

i) While each Member State has its own way of governing its health system, ministries of health set the vision for health system development and have the mandate and responsibility for legislation, regulation and enforcement of health policies, as well as for gathering intelligence on health and its social, economic and environmental determinants.
ii) Health ministries should promote the inclusion of health considerations in all policies and advocate their effective implementation across sectors to maximize health gains.
iii) Monitoring and evaluation of health system performance and balanced cooperation with stakeholders at all levels of governance are essential to promote transparency and accountability.

178. Recent publications in the academic, research, and policy arenas have stressed the importance of stewardship and governance.[47] In fact, recent research has shown that there is a direct relationship between governance and improvements in health indicators, measured in terms of both levels and distribution, specifically lower infant mortality.[48] This idea of

[44] The Tallinn Charter: Health Systems for Health and Wealth, http://www.euro.who.int/__data/assets/pdf_file/0008/88613/E91438.pdf
[45] World Health Organization, 2000, *The World Health Report 2000. Health systems: Improving performance*. Geneva.
[46] World Health Organization, 2007, *Everybody's business. Strengthening health systems to improve health outcomes: WHO's framework for action.* Geneva.
[47] Saltman RB and Ferroussier-Davis O (2000), The concept of stewardship in health policy. Bulletin of the World Health Organization 78(6): 732–739; Reich MR (2002) Reshaping the state from above, from within, from below: Implications for public health. Social Science and Medicine 54: 1669–1675;
[48] Reidpath D, Allotey P. Structure, (governance) and health: an unsolicited response. *BMC International, Health and Human Rights* 2006, 6:12

governance being related to the effectiveness of health system is directly in accordance with the conclusions of the 2008 Tallinn conference on Health Systems, Health, and Wealth.[49]

179. Health stewardship in Romania has been evolving over the years as the country has moved from a non-democratic political regime to a democratic system still in need of modernization and adjustment. Integration into the European Union, decentralization of health services to local authorities, and the evolution of the health community in the context of globalization have further changed the governance of the health sector.

180. Since it became a member of the EU, Romania has worked alongside other EU countries in, for example, developing common policies, fighting common problems (such as health crises), and establishing joint regulatory structures (one example being coordinating the regulation of pharmaceuticals).

181. While a number of ministries and institutions other than the MoH have continued to run their own health networks (for example, the Ministries of Transport and Justice), the health system has also been fundamentally reshaped by the transfer of ownership and management responsibilities to the local level. This has occurred in the context of a broader decentralizing trend in Romanian public services that has been ongoing since the 1991 Constitution (revised in 2003) was adopted. A significant event in this regard has been the recent decentralization of responsibility for health services from the Ministry of Health to district councils and town halls in the summer of 2010.

182. Decentralization has indeed re-defined relationships and incorporated new actors into the policy process. While the MoH continues to be the main steward for health, the National Health Insurance House (NHIH), for example, plays a distinctive role in the financing and purchasing of health services, while district councils and city halls – which report directly to the Ministry of Interior rather than to the Ministry of Health – are now the managers of health care facilities.

183. On a broader scale, EU membership may have the expectations of citizens and politicians to an unrealistic level at this moment in time. Furthermore, the pressing financial and institutional problems stemming from the current economic crisis (overcoming rising poverty levels and facing the increased demand due to economic hardship) are having a polarizing effect more will have to be achieved with less (for example, fewer economic resources and staff due to migration). Ironically, the need for carefully crafted stewardship tools is currently enhanced by the international financial crisis just at a time when consensus may be most needed to ensure the successful development and implementation of the health reform program.

184. The resulting picture is complex, and the dynamics involved pose new challenges for health stewards in Romania. For example, the government's efforts to adapt to the requirements of EU membership by rushing to adopt administrative regions have been

[49] Figueras J, McKee M, Lessof S, Duran A, Menabde N. Health systems, health and wealth: assessing the case for investing in health systems. Copenhagen: WHO Regional Office for Europe, 2008.

accused of "threatening the authority of the central state" [50] and have led to some serious institutional conflicts between local authorities as boundaries and responsibilities have not been sufficiently clarified.

185. So it is clear that the Romanian health system is far more complex than before, as the approaches and instruments for governing it have changed and must unavoidably keep on changing. As in all Western democratic countries, traditional command-and-control, top-down decision-making styles must give way to more consensual and inclusive approaches.

186. For conceptual clarity, this chapter is structured around three specific sub-functions of stewardship that are used in the international literature, namely[51:]

- ***Leadership*** (providing a vision and direction to the health system)
- ***Regulation*** (ensuring fair behavior of health actors and a level-playing field for all)
- ***Accountability*** (conducting monitoring and inspection of performance outcomes).

187. This stewardship section will therefore provide a systematic evaluation of these three sub-functions. We will first describe the mechanisms, tools, and agents that provide leadership, steering, and planning, then those in charge of regulating, arbitrating, and modulating the sector, and finally, we will discuss the issues of ensuring accountability by gathering data and monitoring and inspecting to gauge performance outcomes.

4.2. Leadership and Policy Capacity

188. Leadership capacity includes the ability to set directions, formulate policy, and implement decisions. The purpose of this sub-section is to assess the many factors that affect the capacity of health stewards in Romania to develop wise and effective policies that can be implemented successfully and achieve the sector's goals. We analyze these three dimensions before looking into the MoH's organizational capacity and its fitness to provide effective leadership to the health sector.

189. A number of examples in our review of the health sector policy process (see below) confirmed the observations made by the Functional Review of the Center of Government conducted during the first phase of the broader strategic and functional review of Romania's central public administration. According to that review, over the past decade, "laws have been passed, institutions established, and significant investments made in implementing a modern policy process supported by capable policy institutions. Nonetheless, policy planning remains *ad hoc* and decision-makers are faced with a system that does not produce the quality of analysis they need to make informed policy decisions. A significant gap between what is written in law and what occurs in practice persists."[52]

[50] Dobre A. (2008) Designing and justifying regional reforms: lessons from Romania, *Policy & Politics,* vol. 36, no. 4, pp. 587-600.
[51] World Health Organization (2000) *The World Health Report 2000. Health systems: Improving performance*. Geneva.
[52] World Bank (October 15, 2010) *Romania. Functional Review Center of Government. Final Report*, p. 7

Strategic Planning

190. Ultimately, it is the responsibility and right of the MoH (as the steward of health) to set out the direction and priorities for the entire health sector. Setting the broad direction of the sector and communicating that vision in a transparent manner to citizens, health actors, and stakeholders is therefore a key role of the health steward. As stated in *The World Health Report 2000* published by WHO, "an explicit health policy achieves several things: it defines a vision for the future which in turn helps to establish benchmarks for the short and medium term. It outlines the priorities and expected roles of different groups. It builds consensus and informs people, and in doing so fulfils an important role of governance."[53] The WHO report referred to a shift occurring internationally towards "more inclusive – but less detailed – policy frameworks mapping the direction but not spelling out the operational details."[54]

191. In EU countries, this vision is usually set and communicated to the concerned parties by generating both a strategic policy document and a business plan for the MoH. In the UK, for example, a policy strategy is developed through primary legislation, white papers, and an annual Operating Framework based on the government's three-year planning framework.[55] This framework specifies the priorities and national targets for the health sector and takes account of the general health reform agenda as set out in key policy documents. For example, the Operating Framework for 2009/10 for the UK health sector describes the national priorities for the year and how the vision can be delivered. It sets out how the government expects services to be transformed so that quality is its organizing principle and patients are the arbiter of success. At the same time, the Department of Health publishes its Business Plan (the current one is for 2011-2015),[56] which sets out the priorities and key commitments of the department involved in delivering the reform program. In Italy, the Ministry of Health sets the basic framework and develops a three-year national health plan that sets out the national health strategy and defines health care objectives, targets, and performance indicators.

192. In this context, the existence of both a Strategic Policy document and a MoH Business Plan would align the policies and other elements (such as financial plans, human resources, and facilities) involved in the area of leadership and health system reform. In Romania, the Health Strategy Plan should include key policies (such as the government's program for 2009-2012) reflecting the government´s and MoH's priorities to improve the population's health and the performance goals for the health system. These key policies should be devised with input from all stakeholders from both within and outside the health sector as well as any non-state actors with a stake in health and health care. In turn, the MoH Business Plan would translate those strategic priorities into the objectives and work plan of the Ministry of Health (including all of its agencies).

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[53] World Health Organization (2000) *The World Health Report 2000. Health systems: Improving performance*. Geneva, p. 122.
[54] World Health Organization (2000) *The World Health Report 2000. Health systems: Improving performance*. Geneva, p. 121.
[55] Ettelt S. et al. (2008) *Capacity Planning in Health Care. A review of the International Experience*, Policy Brief, WHO on behalf of the European Observatory on Health Systems and Policies, p. 22
[56] Department of Health (November 8, 2010) *Department of Health Business Plan 2011-2015* http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_121393

193. The truth is, however, that shortfalls abound in the formal process of strategic planning and priority-setting in Romania. While the Ministry of Health develops a Strategy Plan every two years, the content in strict terms corresponds more to a Business Plan than a proper policy and strategy document. We found that the process by which the 2011-2013 Health Strategy Plan was formulated, for example, was a one-way upwards channel developed by the Public Policies Unit (PPU) in the MoH under the direction of the Secretary-General with only formal consultations with other departments within the MoH. There were several ways in which this process fell short of ideal.

i. It failed to produce a document that sets out a strategy based upon a careful scanning of the health and institutional horizon.

ii. It did not enable the sharing of ideas or the discussion of policies.

iii. It seemed to be mostly written to fulfill budget-planning requirements.

iv. It was far from being a rich iterative process that fostered a sense of ownership of the plan throughout the MoH.

194. This means that strategy and financial planning in the health sector are not necessarily aligned. The Functional Review of the Center of Government specifically revealed that policy strategy does not drive resource allocation decisions in Romania and made a number of recommendations that the Health Sector Functional Review team fully endorses.

195. More importantly, in light of the problems and issues identified, there are reasons to believe that Ministry of Health has only limited capacity to perform the kind of wide-ranging, all-encompassing type of strategy planning that is required. The existing Public Policies Unit (PPU), for example, is currently grossly under-staffed.

The Quality of Policy Formulation

196. Leadership capacity is also reflected in the ability to turn strategic visions into evidence-based, well-thought-out, and effective policies.[57] Most developed countries and international organizations have turned their attention over the last decade to developing standards and strategies for making better policies.[58] Two core elements of any best-practice policymaking model are:[59]

i. Policies have to be based upon sound evidence (or at least informed by evidence).

[57] Peters, G.B. (1996) *The Policy Capacity of Government*, Canadian Centre for Management Development, Research Paper no. 18; Bovaird, T. and Löffler, E. (eds.) (2003) *Public Management and Governance*, London: Routledge, pp. 3-12.

[58] UK Cabinet Office (March 1999), *Modernising Government White Paper*, CM 4310; Commission of the European Communities (2001) *European Governance. A White Paper*, COM(2001) 428 final; OECD (2005) *Modernising Government. The way forward*, OECD.

[59] Bochel H. and Duncan S. (2007) *Making Policy in Theory and Practice*, London: The Policy Process

ii. There must be a formal, systematic policy formulation process that includes stakeholders.

197. Romania has a regulatory basis for a modern policymaking process. Government Decision 775/2005 regulated the formulation and monitoring of public policies while Government Decision 1361/2006 covered the preparation of substantiation notes.[60] As in other areas, however, the quality of health policymaking continues to be comparatively poor with other EU countries, and health policies are rarely based on sound evidence.

198. Policies are not based on analysis of quality data from the field. Neither the NHIH nor any other major stakeholder contribute input or evidence to decision-making, and what data do exist are not sufficiently used in negotiating the National Framework Contract. No unit, department, or directorate within the MoH is responsible for health data analysis. The 30-strong analytical unit at the NHIH is mostly dedicated to checking the quality of financial information submitted by health care providers.

199. This absence of any formal, systematic policy formulation process has various negative effects, including engendering a sense of instability in the sector. In only five years, for example, the Health Reform Law 95/2006 has been modified 43 times, mostly through secondary, *ad hoc*, last-minute legislation (see Table 4.1). Revealingly, the use of secondary legislation has become the norm rather than the exception, most likely in an attempt to override approved parliamentary laws or to implement new laws without waiting for Parliamentary approval.[61] *Ad-hoc*, last minute legislation also prevents health stakeholders from contributing to policymaking and thereby limits the possibility of achieving the necessary consensus to ensure successful implementation of health reforms.

Table 4.1: List of Amendments to Law No. 95/2006

# M1	Correction published in the Official Gazette of Romania, Part I, no. 391 of May 5, 2006
# M2	Government Ordinance no. 35/2006
# M3	Government Ordinance no. 72/2006
# M4	Correction published in the Official Gazette of Romania, Part I, no. 823 of 6 October 2006
# M5	Government Emergency Ordinance no. 88/2006
# M6	Government Emergency Ordinance no. 104/2006 * rejected by the Law no. 284/2007 (# M15)
# M7	Government Emergency Ordinance no. 122/2006 * rejected by the Law no. 147/2007 (# M11)
# M8	Government Emergency Ordinance no. 116/2006
# M9	Law no. 34/2007
# M10	Government Emergency Ordinance no. 20/2007
# M11	Law no. 147/2007
# M12	Law no. 264/2007
# M13	Government Emergency Ordinance no. 90/2007
# M14	Law no. 281/2007
# M15	Law no. 284/2007
# M16	Law no. 388/2007
# M17	Government Emergency Ordinance no. 93/2008
# M18	Law no. 157/2008
# M19	Correction published in the Official Gazette of Romania, Part I, no. 608 of August 15, 2008
# M20	Government Emergency Ordinance no. 170/2008
# M21	Government Emergency Ordinance no. 162/2008

[60] World Bank (October 15, 2010), *Romania Functional Review Center of Government Final Report*, p 11
[61] World Bank (October 15, 2010) *Romania. Functional Review Center of Government Final Report*, p 14

# M22	Government Emergency Ordinance no. * 192/2008, repealed by the Government Emergency Ordinance no. 226/2008 (# M24) and rejected by the Law no. 121/2009 (# M26)
# M23	Government Emergency Ordinance no. 197/2008
# M24	Government Emergency Ordinance no. 226/2008
# M25	Government Emergency Ordinance no. 227/2008
# M26	Law no. 121/2009
# M27	Government Emergency Ordinance no. 69/2009
# M28	Government Emergency Ordinance no. 88/2009
# M29	Government Emergency Ordinance no. 104/2009
# M30	Law no. 329/2009
# M31	Government Emergency Ordinance no. 114/2009
# M32	Government Emergency Ordinance no. 1 / 2010
# M33	Law no. 11/2010
# M34	Law no. 91/2010
# M35	Government Emergency Ordinance no. 48/2010
# M36	Government Emergency Ordinance no. 58/2010
# M37	Government Emergency Ordinance no. 72/2010
# M38	Law no. 165/2010
# M39	Government Emergency Ordinance no. 82/2010
# M40	Government Emergency Ordinance no. 107/2010
# M41	Government Emergency Ordinance no. 117/2010
# M42	Government Emergency Ordinance no. 133/2010
# M43	Law no. 276/2010

200. In order to improve evidence-based policymaking in the health sector in Romania, an adequately staffed team at the MoH could bring together epidemiologists, public health specialists, economists, statisticians, operational researchers, and sociologists among other experts. They could also liaise with the NHIH and seek input from the National School of Public Health, the National Institute of Public Health, and other relevant institutions.

201. The decentralization reform was another example of a poorly structured and planned policy formulation process. The reform was passed by Emergency Ordinance no 162 / 2008, then amended by Ordinance no 17/2009, Ordinance no 12/2010, and Emergency Ordinance no 48/2010. Instead of these ad hoc ordinances, such a radical overhaul of the system would have benefitted from a more formal, inclusive, and systematic lawmaking process.

202. In fact, the framework law on decentralization no. 195/2006 stipulated a number of steps and prerequisites for ministries and other central government bodies to:

a) Develop strategies for transferring their responsibilities to the local governments and draft acts for this transfer to be implemented. .

b) Transfer the resources used to fund these responsibilities to local governments according to the law.

c) In cooperation with the local governments' representative associations, ensure that over the long term any cost variations in the provision of decentralized public services are covered.

d) Based the transfer of responsibilities on impact analyses carried out according to specific methodologies and monitoring indicators developed by all the ministries involved in the decentralization process.

e) Establish the cost standards for financing decentralized public services as well as the quality standards for public service delivery by local governments.

f) Require the local authorities to meet these cost and quality standards in the provision of decentralized public services.

203. In reality, however, the overhaul of the system with the health decentralization reform has

- not been accompanied by a coherent reform strategy,
- not been supported by sufficient financial means,
- lacked clear rules for transferring competences from central to local government, and
- not anticipated the necessary HR and managerial capacity at the local level to ensure the successful transfer of services to local authorities.

204. A more evidence-based, transparent, and carefully thought-out process of policy formulation could be pursued, as recommended by the Functional Review of the Center of Government. The review recommended reducing *ad hoc* decision-making, in particular by reducing the use of emergency ordinances. We fully endorse this recommendation for the health sector.

Insufficient Implementation

205. The ultimate proof of a steward's capacity to manage the health system is putting into effect its vision and policies. As analysts have observed, "Producing a vision or strategy is often the easy part… ensuring effective implementation is much more problematic because it involves time-consuming alliance building among many potentially competing interests."[62] This is all the more important now that implementation of public policy cannot longer be seen as the simple transmission of instructions from the political center to the periphery.[63]

206. Because of the complexities of governance in the health sector, every modern government develop new strategies and approaches to create the necessary conditions for policy implementation.[64] In the UK, for example, several innovative strategies had to be

[62] Hunter D.J, Shishkin S. and Taroni F., (2005) "Steering the purchaser: stewardship and government", in *Figueras J. et al. (eds.)* Purchasing to improve health systems performance, European Observatory on Health Systems and Policies, p. 171.
[63] Pressman, J.L. and Wildavsky, A. (1973) *Implementation*, Berkeley, CA: University of California Press.
[64] Hill M. and Hupe P. (2002) *Implementing Public Policy*, London: Sage.

devised, including setting delivery units at different levels of government, improving the delivery skills of the civil service, and involving front-line staff in policymaking.[65] A review of successful health system reforms in Finland, Korea, México, Switzerland and Turkey (Hurst, 2010) suggests that the key factors for implementation include:[66]

- Using evidence and analysis, including international comparisons
- Securing political leadership and getting key stakeholders (including doctors) on board
- Putting in place incentives (and disincentives) to encourage the attainment of the desired targets
- Raising sufficient resources to support the reforms.

207. In Romania, implementation is perhaps the most serious problem in the field of stewardship. Very often, policies and programs are passed, rubber-stamped, and even budgeted for but are never delivered. The need to meet the requirements posed by the EU and other agencies as preconditions for disbursement probably contributed to this problem in no small amount. On other occasions, an "implementation gap" appears; in other words, the successive amendments to the original policy make its final objectives very different to those stated in the original legislation. This seems to have been the case, for example, with the Insurance Law.[67]

The Organization of the Ministry of Health

208. From an institutional point of view, the very design of the MoH seems to also explain some deficiencies in the health policymaking process in Romania.

209. Ideally, the logical organizational design of a health ministry should include a combination of: (i) functions, responsibilities, and tasks (what is the MoH supposed to achieve and do?); (ii) structures, relationships, and organizational architecture (what structures are needed in the MoH?); and (iii) numbers and types of staff (how many and what kinds of personnel are needed?)

210. However, our analysis of the MoH in practice revealed unclear internal managerial lines, fragmentation, and a poor corporate behavior. MoH interviewees told the Health Sector Functional Review team of "silo" practices within the ministry with little effective inter-department coordination. There is a lack of clear understanding of tasks and responsibilities: "none knows what to do, everyone seems to be doing everything", as one of the interviewees put it. To our knowledge, there are no formal workflows, job descriptions, or internal

[65] Policy Hub, UK National School of Government, *Improving Delivery,* http://www.nationalschool.gov.uk/policyhub/improving_delivery/index.asp
[66] Hurst J. (2010) *Effective Ways to Realise Policy Reforms in Health Systems*, OECD Health Working Papers, no.51.
[67] Vladescu C. et al. (2008) *Romania. Health System Review,* Health System in Transition (HiT), vol 10, no. 3, European Observatory on Health System and Policies.

operational manuals. The level of job satisfaction among civil servants is low, and evidence suggests that the number of those who leave the MoH to take on jobs elsewhere continues to grow. The decentralization of responsibility for services to local authorities has added to the complexity of the MoH's already difficult role of steering the health system.

211. The organization of the MoH is dictated by Government Regulation no. 144/2010, but the theoretical structure bears no relation to the organization's many imbalances and complexities in practice. The allocation of the 258-strong staff across the MoH in particular does not follow any coherent design. For example:

- The seniority of departments seems to be allocated according to the number of staff they contain (General Directorate, Directorate, Department, Operating Center, and Unit) rather than to their functional importance, tasks, or responsibilities.

- At the moment, certain units report directly to the Minister, services to the Under-Secretary of State (A&E) and most functional units to the Secretary-General without too clear rationality (perhaps expressing historical processes, or political preferences);

- Accountabilities within the MoH (who reports to whom?) are not very clearly defined.

212. Table 4.1 below shows staff in the four core coordination units of all Romanian ministries. Given the limited involvement of the MoH in the financing and purchasing of health services and its supposed focus on providing policy guidance, there is a striking contrast between the staffing levels of the Public Policies Unit (PPU) and the Economics/Budget Units. As it can be seen, the Economics/Budget Unit and the European Affairs Unit are well staffed (the budgeted posts are all filled). The PPU, on the other hand, which holds the mandate to coordinate internal policy formulation, is seriously under-staffed, with only two of the eight budgeted posts filled (and at present one of those two PPU members has been seconded to another Directorate). Furthermore, despite the highly political importance of the health sector and the need to develop strategic vision at the MoH, the number of people dedicated to this task (the two posts at the PPU) is well below the average for all ministries (five posts). The other two welfare ministries have more analytical and strategic capacity than the MoH; the PPU at the Ministry of Education has seven staff while the PPU at the Ministry of Labor, Family, and Social Protection has 13.

Table 4.2: Staffing Levels of the Core Coordination Units within Ministries

Ministry	PPU		Economics/ Budget Unit		European Affairs Unit		Legal Unit		Total	
	Filled	Budget	Filled	Budget	Filled	Budget	Filled	Budget	Filled	Budget
Administration & Interior	13	13	63	81	73	78	91	97	240	269
Agriculture & Rural Development	2	3	117*	126*	*	*	*	*	119	129
Communication & Informational Society	2	2	6	15	2	8	4	12	14	37
Culture	1	1	15	16	4	4	6	7	26	28
Economy, Commerce, & Business Environment	3	3	28 ***	31 ***	87	94	24	27	142	155
Education, Research, Youth, & Sport	7	10	19	19	16	16	28	28	70	73
Environment & Forests	2	3	12	29	14	17	15	29	43	78
Foreign Affairs	6	6	46	47	14	16	4	8	70	77
Health	2	8	30	31	5	5	11	16	48	60
Justice	7	8	24	24	18	19	23	23	72	74
Labor, Family, & Social Protection	13	13	34	39	12	16	13	16	72	84
Public Finance	4	8	30	33	22	25	37	45	93	111
Regional Development & Tourism	2	5	42	43	9	9	26	27	79	84
Transport	**	**	42	42	27	27	31	31	100	100
Average across all Ministries	5	6	30	35	23	26	24	28	82	95

Source: World Bank (October 15, 2010) *Romania. Functional Review Center of Government Final Report*, p 19
Notes: "Public Policy Unit," "Economics/Budget Unit," "European Affairs Unit" and "Legal Unit" are generic terms, and may have different titles in different ministries.
* Staff numbers not broken down by Economics/Budget Unit, European Affairs Unit, and Legal Unit.
** Not a formal policy unit, function is performed by a working group.
*** Function is covered by two different units.

213. Strengthening the health system will also require reinforcing the capacity of the MoH to coordinate its work with that of the NHIH, district and local councils, the Ministry of Public Finance, the Ministry of Interior, National Hospital Accreditation Commission, and actual care providers.

4.3. The Regulatory System

214. As indicated, the radical transformation of the Romanian health system in 2010 created a complex regulatory framework. This now requires fine-tuning and rationalizing in order to ensure the coordinated and coherent pursuit of health gains, financial protection, efficiency, and responsiveness to citizens' expectations.

215. For the purpose of this review, regulation is defined as the "sustained and focused control exercised by a public agency over activities which are valued by a community".[68]

[68] Selznick P (1985) 'Focusing organizational research on regulation' in *Regulatory Policy and the Social Sciences*, Noll RG ed, pp 363–8. Berkeley: University of California Press.

This definition also involves creating mechanisms that allow health stewards to influence the behavior of actors (for example, agencies, public and private providers, and health staff) in order to ensure the achievement of governmental objectives such as efficiency and consumer safety in the face of potential market failures.

216. Conceptually, our analysis of the regulatory system in health will be divided into economic regulation and quality regulation.[69]

- Economic regulation addresses financial and economic dimensions (for example, how new providers' enter the market, how prices are set, how competition is promoted or maintained, how financial monitoring, intervention, and market exit are set up, and the assessment of the cost-effectiveness of clinical interventions).

- Quality regulation addresses service coverage (ensuring that services are effectively available to patients), quality assurance and control (to protect patients from sub-standard providers), and choice and responsiveness (to enable patients' voices to be heard).[70]

217. The economic regulation of services is covered in detail in the previous financing section of this document so will not be included here.

Regulating Health Professionals

218. A basic regulatory framework for doctors and other medical staff exists. Doctors, dentists, and pharmacists are licensed/registered by their professional associations while nurses are registered by the MoH and the College of Nurses. In the case of doctors, the College of Physicians (CoPh) runs a Physicians' Register that is published on the official website of the College. The CoPh has also established a Code of Medical Deontology. Public Health Authorities have established at the national level a Monitoring Committee of Professional Competence in Cases of Malpractice.

Quality Regulation

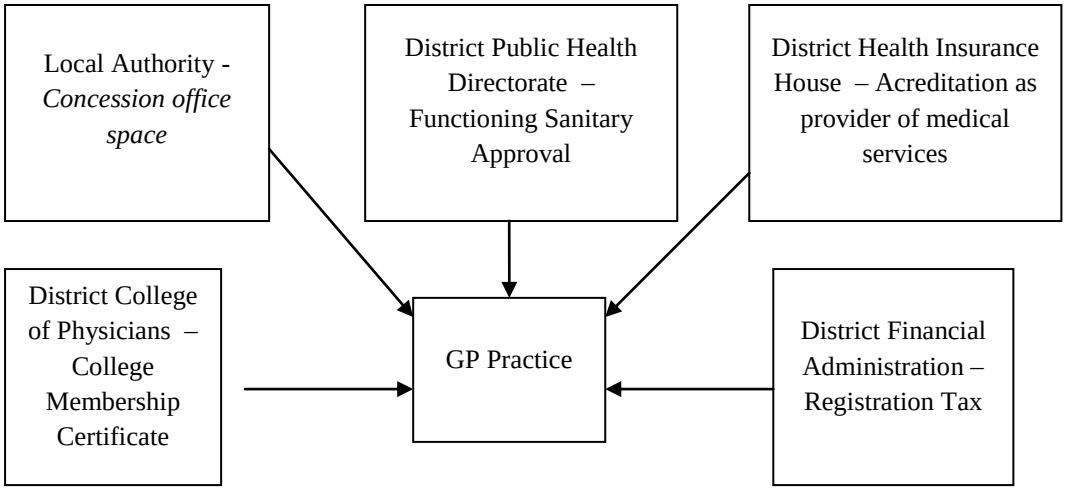
219. Our analysis of the health system's performance identified substantive areas for improvement linked to avoidable mortality in fields such as infant and maternal mortality and cervical cancer mortality. Therefore, it seems highly appropriate to emphasize the quality aspects of care. In this regard, the literature (Scrivens and Skelton, 2008) differentiates between organizational licensing ("a mechanism to establish basic competencies to deliver services or specified treatments or care") and organizational accreditation ("an external

[69] Monitor (October 2005) *Developing an effective market regulatory framework in healthcare*. London: Monitor; Lewis R. et al. (2006) *How to regulate healthcare in England. An international perspective*, London: The King´s Fund.
[70] Lewis R. et al (2006), *How to regulate healthcare in England; an international perspective*, London: The King´s Fund

review of standards, used to promote quality improvement").[71] Organizational accreditation involves a more comprehensive and sustained control over the activities of individuals and organizations.

220. Basic licensing requirements for opening up health care centers exist in Romania. For example, , the legal requirements for opening up a GP center are shown in Figure 4.1.

Figure 4.1. Legal Requirements for Opening a GP Center



221. Hospitals also require a "sanitary authorization" to operate in Romania. After obtaining the sanitary authorization, hospitals have to apply for "accreditation" from the National Commission of Hospital Accreditation (NCHA). The process cannot extend more than five years after obtaining the sanitary authorization or the hospital will be closed.

222. In other words, a system does exist for the licensing of health care providers (primary care, ambulatory and hospitals). However, there is no comprehensive and sustained organizational accreditation of primary, ambulatory, or hospital providers that ensures that services are effectively available to patients when they need them or that they are of the highest possible quality. Any comprehensive process for monitoring quality should include performance indicators, including quality outcomes such as avoided mortality and process indicators such as bed occupancy.

223. Interestingly enough, the Health Reform Law (95/2006) made the Ministry of Health and the NHIH responsible for establishing quality criteria for the care provided to insured persons, and all health care providers who have signed contracts with health insurance funds must adhere to these criteria.

224. At the clinical level, the College of Physicians and the MoH have developed clinical protocols and guidelines, although evidence suggests that they tend not to reflect the way services are delivered or the requirements of real patients in the country.

[71] Scrivens E. and Skelton L. (2008) "The role of organizational licensing in healthcare," *The Journal of the Royal Society for the Promotion of Health*, vol. 128 (6), p.300

225. The NCHA is functionally dependent upon the Prime Minister through a state counselor designated for this purpose. The reason for this was to ensure its independence from the MoH, a fair reason while the MoH directly managed health care providers and an independent regulator was needed although decentralization to local authorities has arguably changed the situation. However, the biggest risk at the moment is the fragmentation of the regulatory system.

226. Surprising as it may sound, the NCHA lacks of protocols for conducting regular performance evaluations (outcomes-focused quality assessments), and the current design seems to consider accreditation simply as an expanded licensing system that includes a few features of accreditation programs. The NCHA currently has 11 references, 90 standards, 391 criteria and 1914 measurable indicators that are extremely difficult to implement, and in the opposite side of the practical approach implemented by the Care Quality Commission,(the independent regulator of health and social care in England), system that only uses 25 indicators to assess performance.

227. However, the NCHA is undertaking capacity planning tasks, which should logically fall under the sole remit of the MoH. Given that the NCHA is currently under-staffed, with only 31 out of 60 posts filled, this role puts extra pressure on the NCHA to fulfill its regulatory role. In other words, the NCHA is falling short as a quality regulator, while it is undertaking additional responsibilities and tasks that go beyond its regulatory remit.

228. Finally, there is no formal mechanism to ensure that the voices of patients and users regarding quality are heard.[72]

4.4. Accountability Relationships

229. For the purpose of this review, accountability is defined as an ongoing relationship between an accountee (the ”principal” – for example, the health authority) and an accountor (the “agent” – for example, the hospital or facility manager). It involves the accountor being accountable for the use of public resources and for the actions they have taken to fulfill the objectives required of them. It also involves the accountee being responsible for imposing penalties and enforcing them when necessary.[73]

230. Accountability is increasingly seen as an essential tool for improving the performance of the health system by reducing abuse and assuring compliance with procedures and standards.[74] Governments throughout the world are feeling the need to clearly locate

[72] Leatherman S. and Sutherland K. (2005), *The Quest for Quality: a Chartbook on Quality of Care in the UK*, London: The Nuffield Trust. Quality is defined in terms of access, effectiveness, capacity, safety and patient-centeredness.
[73] Dixon A et al. (2010) ‘The Accountability Maze in the Reformed NHS: The experience of foundation trusts’, *Journal of Health Services Research and Policy*, vol. 15, pp. 82-89.
[74] Brinkerhoff D (2004) Accountability and health systems: toward conceptual clarity and policy relevance, *Health Policy and Planning* 19(6): 371–379.

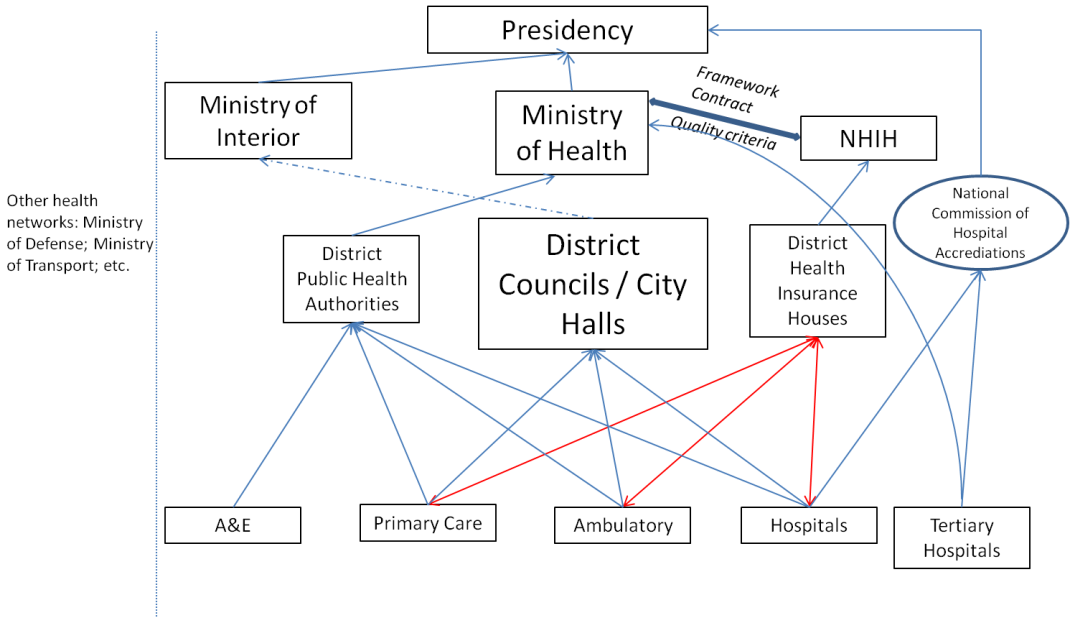
responsibility for actions.[75] In the current financial crisis, increasing accountability is helping to "detect and therefore reduce waste or other misuse of resources, malpractice, or negligence. In addition, good stewardship involves ensuring that mechanisms for accountability are fair and do not exclude particular groups" (Travis et al, 2002).[76]

231. The purpose of this section is therefore to identify current accountability mechanisms, to strengthen those already in place, and to fill existing gaps or reduce the burden of unnecessary supervision.

232. As already indicated, recent reforms to improve the performance of the health system have transformed accountability relationships in Romania. These reforms have included the setting up of the NHIH to administer and regulate the health insurance system, the use of a framework contract to base the development of individual contracts with health care providers, and the establishment of the NCHA. However, it is probably the decentralization of service provision to local authorities that will have the greatest impact on accountability in health. It involves two opposite risks – first, the risk that such radical change may lead to excessive auditing and reporting, and, second and more importantly, the risk that it will lead to serious accountability gaps, potentially allowing corrupt practices to flourish.

233. Figure 4.2 aims to capture accountability relationships in the Romanian health system now that care services have been decentralized to the local level. The arrows in red represent a contractual relationship between health care providers and the NHIH through the DHIH, which differs from the hierarchical links or the simple submission of information that characterize other relationships in the system.

Figure 4.2: Accountability Relationships in the Romanian Health System



[75] Tuohy C. (2003) Agency, Contract, and Governance: Shifting Shapes of Accountability in the Health Care Arena, *Journal of Health Politics, Policy and Law*, Vol. 28, Nos. 2–3, 195-215.
[76] Travis, P. et al. (2002) *Towards better stewardship: concepts and critical issues*, Geneva: WHO, http://www.who.int/healthinfo/paper48.pdf

234. Our first intuitive conclusion was that the system is overly complex, which was confirmed by interviewees at the national, local, and hospital levels. We held panel discussions at the district level with representatives from the district public health authority, the district council, the city hall, and the district health insurance house as well as hospital managers. At these discussion, the responses to our question "Who is the owner/boss of the health centers?" were different and even contradictory, reflecting a poor understanding of who is responsible for what.

Accountability of Health Care Providers

235. As reflected in the interviews that we conducted, it is not totally clear to managers (especially hospital managers) who their boss is. Managers are at the moment have three separate accountability relationships, namely, with: (i) district councils and city halls; (ii) the MoH; and (iii) the NHIH. This results in different reporting requirements (although, on many occasions, the same data are requested), putting a heavy bureaucratic burden on health service managers. Most worryingly, it is not clear what the penalties are for underperforming providers and who can enforce them.

236. Many issues emerge from the fact that primary care centers, ambulatory facilities, and hospitals are now to a great extent under the authority of district councils and city halls. First, as already discussed, local authorities report to the Ministry of Interior and not to the MoH on the performance of the services that they run. Second, hospital managers sign a contract with the district council or city hall that requires that they be removed if they fail to deliver. The first evaluation conducted by local authorities on their managers took place while this Functional Review was being written and the results have not yet been made public so the impact of this new system on the sector is still unknown. Third, local authorities have only limited capacity to hold hospitals to account. In addition, the legal framework regulating the assignment of responsibilities to local governments is not very structured or integrated. There are different provisions about the assignment of expenditure responsibilities to local governments in various pieces of legislation, which has considerably confused the issue. In addition, the wordings have not been clear, with the omnipresent phrase "according to the law" making reference to other laws that are often incomplete, intricate, or confusing.

237. The second layer of accountability for primary care facilities, ambulatory care facilities, and hospitals is to the MoH through the district public health authorities. At present, 47 tertiary hospitals providing services across districts, psychiatric hospitals, and single-specialty centers remain under the responsibility of the MoH. Ambulance and emergency centers, on the other hand, report to the MoH via the district public health authorities. Contrary to what is commonly the rule, however, we found the relationship between the health facilities and the local health authorities extremely weak. Each provider is required to make an annual report on its activities to the MoH but beyond this, we have not found any formal accountability mechanism.

238. The accountability of primary care centers, ambulatory facilities, and hospitals to district health insurance houses is not hierarchical but is mediated through a contract. These contracts is based on the Framework Contract agreed by the MoH and the NHIH. The MoH requires the facilities to report annually, while the NHIH requires them to report bi-annually. In addition, given the level of detail in the Framework Contract, little remains to be added at the local level in terms of specific activity volumes, quality indicators of importance in that local area, or targets adapted to local conditions. Thus, the potential for individual contracts between a hospital manager and the local DHIH to enhance accountability is lost.

239. To conclude, even though the overlapping of three distinctive accountability relationships adds more bureaucracy to the system, none seems to be effectively performing the task of holding providers to account. What is more worrying is that nobody seems to be monitoring the quality of care in a thorough manner.

Capacity at the Local Level

240. Whether district councils and city halls will be able to hold health care providers properly accountable is a matter of concern. They will need to create special units (known as "units for hospital management") for this purpose and at the moment only a few district councils have created them. An EU-funded project is currently underway aimed at training local staff to audit and inspect decentralized public services.

241. Also, increasing accountability will require a radical transformation in transparency and open communications across the board, which are clearly below optimum levels at the moment in many areas, starting with the MoH and the NHIH. None of these bodies have made their annual reports available to patients and citizens in recent years, either on the Internet or by any other means.

242. An effort would therefore need to be made to clarify, strengthen, or redesign accountability relationships. Increasing transparency is at the core of this effort. Reinforcing the MoH's role as a policy leader (as opposed to its administrative role) and the NHIH's role as a purchaser of services (as opposed to simply the payer) should be a particular priority. The roles of local authorities should also be clarified, and their capacity for self-auditing and for inspecting health care services could be strengthened.

The Autonomy and Transparency of the NHIH

243. Setting up independent agencies at arm's length from the government to run public services has been a common trend in modern public administrations around the world.[77] The purpose of these agencies is to ensure a level playing field for both public and private

[77] OECD (2002) *Distributed Public Governance. Agencies, Authorities and other Government Bodies*, Paris: OECD; Thatcher M (2002**)** Regulation after delegation: independent regulatory agencies in Europe. Journal of European public policy, 9 (6). pp. 954-972.

providers and to increase efficiency and transparency by bringing in flexibility, expertise, and experience that would not normally be available in a government department.[78]

244. There is little doubt based on these international trends that the NHIH has to remain autonomous in order to fulfill its mission. However, it needs to greatly increase its transparency by making public its annual reports, auditing memos, and technical documents as a way to strengthen its independent regulatory role.[79] This would help to prevent possible interference from and capture by powerful lobby groups.

245. The NHIH could also play a more pro-active role in releasing information on the quality of health care delivered by identified providers. Many countries including Denmark, England, Germany, the Netherlands, Sweden, Australia, Canada, and the United States are implementing national quality or performance assessment frameworks to strengthen the accountability of the health system.[80]

246. At the moment, the NHIH checks hospitals' self-reported data and is allowed to inspect hospitals and impose sanctions in the case of misconduct (although these inspections tend to be random simply to ensure the consistency of the data submitted by the provider). The health information system currently being developed (SIUI) should allow for a more effective inspection scheme (for example, based on previous risk assessments). Such information could be shared with the public to a much greater extent.

4.5. Recommendations and Conclusions

247. Changes in the stewardship function are essential and are needed urgently. For that reason, our recommendations are designed specifically for the Romanian context and to have the maximum effect on the system. However, the cost of interventions in the stewardship function should be as low as possible in order to retain the maximum funds to allocate to improving service delivery and to the generation of system inputs (such as staff, technology, and buildings). At the same time, unnecessary institutional reforms might distract decision-makers and implementers from other more pressing and necessary actions at all levels. Therefore, we recommend the following actions:

a. Strengthen leadership

248. The findings of our review of the leadership sub-function in Romania strongly indicate a need to increase the leadership role of the stewards of public health. Wise and

[78] Dixon, A. and Alvarez-Rosete (2007) Governing the NHS. Alternatives to an independent board, London: The King´s Fund

[79] Savedoff W et al (2010) Promoting accountability in health care financing institutions, in Kutzin J, Cashin and Jakab (eds.) *Implementing Health Financing Reforms*, WHO/European Observatory on Health Systems and Policies, pp. 361-380

[80] Cacace M. et al. (June 2010) *How health systems inform on provider performance: Experience in seven countries.* Draft Final Report, London: Rand Europe and LSHTM

effective policies that can be successfully implemented in order to reach their goals are much needed. At the center of this effort is the conviction that health reforms and policies can only be successful if they are the result of a solid consensus between the Ministries of Health and Finance to guarantee their feasibility and sustainability over time.

249. **Creating a National Health Council/Commission to build consensus and implement proper policy proposals.** The MoH needs to recognize the importance of involving all key health actors in the center of government in formulating and implementing health reforms and policies. This will require an open and inclusive policymaking process. While choosing the general direction for the sector is a key role of the health steward, its vision has to be openly and transparently communicated to citizens and other health stakeholders if it is to be successful.

250. **Designing and implementing a communication campaign (to citizens and other health stakeholders) explaining the sector vision and the reform being implemented.** Developing a proper communications strategy in the MoH will help to explain its vision and reform goals.

251. Strengthening key departments in the MoH, particularly, the PPU, with sufficient numbers of staff with the right skills mix in order to increase policy and delivery capacity. This strengthening could also include the agreements/contracts with the Public Health Institute to perform specific activities.

b. Improve the regulatory framework

252. **Conducting a thorough review of existing regulations in need of modernization and simplification.** The health care regulatory framework in Romania also needs strengthening and rationalizing. Both regulatory gaps and overloads have been observed, and regulations is often adopted without the means and tools needed for their effective enforcement. Also, new regulatory layers (for example, EU laws and requirements) are being added to old, ineffective national laws, leading to a confusion and overlaps. The decentralization of services to local authorities has made the system even more complex. Our recommendations aimed at rationalizing and strengthening regulation in Romania include:

253. **Review the legal framework regarding the National Commission for Hospital Accreditation.** The focus of this agency could be concurrent quality-oriented performance appraisals. In the context of the decentralization process, its autonomy could also be reviewed. The review could focus on setting up a system for quality regulation consistent with the overall strategic priorities supported by quality monitoring and inspection of health care providers according to proper quality criteria. The system should ensure that services are available to patients when they need them at the highest level of quality possible ascription and in line with patients' preferences.

254. **Clarify and increase the scope for facility management, reducing current regulations and allowing them to adopt new arrangements (including staffing norms).**

Lifting excessive regulatory burdens and rigidities to allow for more effective management of health services.

c. Clarify accountabilities and increase transparency across the system

255. Recent reforms aimed at improving health system performance have transformed relationships among institutions in the health sector. The setting up of the NHIH to administer and regulate a health insurance system, the use of a framework contract as the basis for developing individual contracts with health care providers, and the establishment of a national hospital accreditation commission were some of the major steps taken in recent years. Decentralizing the ownership of most public health service provision to local authorities will surely have also an enormous impact on the system. There is a risk, however, that these radical changes may distort the overall accountability relationships, perhaps leading on the one hand to excessive of auditing and reporting and, on the other hand, serious accountability gaps.

256. Therefore, the government could **review the entire regulations to unambiguously locate responsibility for actions of all participants at center and local levels making an effort to clarify, strengthen, or reassign accountabilities across the board**. Increasing transparency is at the core of this effort. Refining the MoH's policy leadership role (as opposed to its administrative role) and the NHIH's purchaser role (as opposed to its role simply as a payer) could be a particular priority. The roles of local authorities could also be clarified and their capacity for self-auditing and inspecting health care services should be strengthened. Overall, the actions that we recommend on this front include:

a. Ensuring the MoH takes the lead in unambiguously assigning responsibility for the actions of all participants at the center and local levels (including the MoH itself, NHIH, the NCHA, the district authorities, town halls, health care providers including institutes, and other agencies).

b. Ensuring that the above tasks, responsibilities, and accountabilities are clearly formulated and discussed in the MoH's communications strategy.

c. Guaranteeing the autonomy of the NHIH as a health purchaser as recommended in the financing chapter. Notwithstanding this, there needs to greater clarity about its accountability and more transparency across the board.

d. Developing and reinforcing the capacity of all stakeholders to hold each other accountable as well as the related instruments (regular, up-to-date publishing of reports, audits, and business plans).

5. RESOURCE MANAGEMENT (PHARMACEUTICALS AND HUMAN RESOURCES)

5.1. Pharmaceuticals Management

257. As stated in the Tallinn Charter (2008),[81] "Fostering health policy and systems research and making ethical and effective use of innovations in medical technology and pharmaceuticals are relevant for all countries; health technology assessment should be used to support more informed decision-making".

258. A large and quickly growing proportion of health care expenditure in Romania is accounted for by medicines. The pharmaceutical market in Romania was valued at €1.68 billion in 2008, a 7 percent increase over the preceding year, but this followed 19 percent growth in 2006. Pharmaceutical expenditure is increasing faster than economic growth and also than expenditure growth in other sectors of the health care system. As a result, containing costs and achieving value for money are an ongoing challenge.

259. A very substantial proportion of the funds at the disposal of the NHIH are spent on medicines. The amount budgeted for 2011 was 20.7 percent of the total NHIH budget, which is high in comparison with other European and even former eastern bloc countries and represents a fiscal imbalance in the management of the health budget. That said, the overall magnitude of expenditure on medicines is not high in comparison with Romania's neighboring countries or others of similar national wealth. Nevertheless, the magnitude of this growth, particularly of newer, more expensive medicines, coupled with the pricing structure of what is being reimbursed for are matters of concern.

260. There are a number of separate elements that appear to be poorly integrated, and some of the existing policies are at worst counterproductive, and at best unnecessarily complex, creating uncertainty and a lack of confidence among stakeholders.

261. While average overall drug spending in Romania is not high on a per capita basis, it is growing rapidly with no obvious corresponding improvement in health outcomes and is increasing inequities of access to health services within the population. The imbalanced escalation of this input is reducing the resources available to finance the other needs of the health system. The government has a range of policy options to choose from to address the concerns of the various stakeholders in the system, improve decision-making, enhance value for money, increase efficiency and timeliness in distribution and payment, and reduce the extent of informal payments and incentives for parallel export (which creates shortages of essential medicines). Initiatives on both the supply and demand side will be necessary to increase value for money and cost containment in pharmaceutical expenditure, while at the same time promoting equity and enhancing affordable access to cost-effective essential medicines.

[81] The Tallinn Charter: Health Systems for Health and Wealth, http://www.euro.who.int/__data/assets/pdf_file/0008/88613/E91438.pdf

262. Implementing these policies will require time and resources, and above all, political will. Also, these interventions will need to be reinforced by the interventions suggested in other sections of this functional review, without which the extent to which changes in pharmaceutical regulation and policy will be able to achieve their key objectives will be limited. Moreover, as long as Romania continues to have no overarching national medicines policy, the various pharmaceutical regulations and policies will remain poorly integrated and *ad hoc* and unlikely to achieve greater equity, efficiency, affordability, and appropriate access.

The Main Problems of Pharmaceutical Management

263. *Regulatory Framework.* The accession of Romania to the European Union and its participation in the Collaboration Agreement between Drug Regulatory Authorities in EU Associated Countries (CADREAC) has facilitated the establishment of EU standards of drug regulation in Romania. However, there are now substantial delays in re-approvals and variations for medicines that were previously approved under Romanian law due to under-resourcing of the National Medicines Agency (ANMDM) and the exodus of experienced staff following salary cuts. As a result, the agency currently has limited monitoring and enforcement capacity.

264. *Financing.* Budgetary constraints have led to significant delays in reimbursing pharmacies, delays that are now believed to commonly exceed 300 days. This in turn means that pharmacies have to delay paying their wholesalers and manufacturers for as long as a year. Total pharmaceutical debt is reported to be around €1 billion. Nine wholesalers reportedly awaiting payment of more than €25M have recently become insolvent, and many pharmacies have also gone out of business. Delays in payment are particularly severe for drugs delivered under national programs (for which no co-payments are required). Delays in payments to pharmacies gives them an incentive to promotion the sale of drugs with high out-of-pocket (OOP) costs (for example, through private prescriptions or as over-the-counter drugs or those priced above the benchmark) as this improves their cash flow. It has been alleged that up to 60 percent of the value of the drugs' market is paid for in cash (implying that the contribution of reimbursement to costs is only 40 percent).

265. *Lists of Drugs.* A complex system of pricing and reimbursement is currently in operation. It has been subject to extensive and frequent modification over recent years in attempts to contain costs. These efforts have been interspersed with (and undermined by) additions to the reimbursement list, which have apparently taken place with no clear cost-benefit analysis and no consideration of the system's capacity to fund the drugs in question. The reimbursement formulary consists of three sub-lists with different levels of co-insurance. The process by which drugs are added to the list appears to be non-transparent, inconsistent, and only weakly evidence-based. Only indirect consideration is given to cost-effectiveness, and there is no budget impact assessment. Drugs that are added to the reimbursement list are not limited to particular indications, patient populations, or treatment settings, and their quantities are not capped. In addition, the MoH and the NHIH appear to reimburse for a

number of drugs that are for medical conditions that are not the ones for which the drugs are registered.

266. *Access and Affordability.* There are three elements related to the availability and affordability of drugs in Romania. The first is the extent and structure of patient contributions, which are set at different levels of co-insurance, rather than as fixed copayments. The second relates to the use of external reference pricing, which in turn gives drug manufacturers an incentive for parallel export (estimated to be as high as 20 percent for some medicines) and contributes to shortages in domestic supply. A third issue arises from the monthly budgeting process at the level of the district health insurance houses. Once the district HIH has expended the allocated funds to pharmacies for a given month, the pharmacies may continue to dispense drugs beyond that financial limit but will not be reimbursed for them. This leads either to the unavailability of certain medicines or to patients paying for prescriptions entirely out of pocket. Even though the law requires prescribing by international non-proprietary name (INN) and legal substitution of brand name drugs for generics at the pharmacy, both the volume and value of generic drug sales are low and have declined in recent years. There is widespread mistrust among the population about the quality and safety of generics, a perspective not discouraged by the brand name drug manufacturers. They heavily promote any new medicines to doctors, and mandatory prescribing by INN can be circumvented. A significant proportion of prescriptions are dispensed for products that are not at the reference or benchmark price, thus increasing the costs to the patient. This may be because the reference-priced product is not available, because of the pharmacist's influence on the patient, or because particular brands are preferred by patients and/or their prescribers, resulting in significant amount out-of-pocket costs to patients. The net effect is that brand new drugs continue to maintain a majority market share, meaning that there is scope for the share of generics in the market to be significantly increased.

267. *Rational Drug Use.* Currently little is done to monitor and/or evaluate prescribing or to promote rational drug use. The current phased introduction of more sophisticated electronic prescription monitoring by the NHIH can enable better monitoring of prescribing practices, enabling the NHIH to give feedback to individual prescribers. It would also help to reduce prescription fraud. The 2011 Framework contract mandates the introduction of indicative prescribing budgets for individual GPs and specialists. Allegations of various fraudulent practices involving sales of prescriptions, prescriptions for dummy patients, dummy prescriptions for actual patients, and over the counter pharmacy sales of prescription-only medicines have been made by several sources.

268. *Distribution System.* The total number of drug wholesalers in Romania is approximately 40 (although there are a number of pharmacies also registered as wholesalers), but there is significant market concentration, with 12 wholesalers supplying 80 percent of the market. In addition, there is significant vertical integration with eight of the major wholesalers owning 25 percent of the pharmacies nationwide. Because wholesalers provide less favorable terms to independent pharmacies, several of them have gone out of business. Wholesale and retail margin/markups are regulated and progressive, which creates incentives for pharmacies to provide higher-cost medicines with higher margins and discourages them

from promoting generics to patients. Promoting products that require higher out-of-pocket payments also improves cash flow for pharmacies. Extensive discounting and bundling at both the wholesale and pharmacy level gives pharmacies an incentive to supply particular products and create windfall gains as products are reimbursed by the NHIH at the full reimbursement list price.

269. *Taxation.* VAT on medicines in Romania is high (9 percent), especially given the extent that out-of-pocket payments for medicines put an excessive burden on the lowest-income groups. The rate compares unfavorably with many EU countries. For example, in the UK, Sweden, and Cyprus, there is no VAT on prescription medicines, and in France, it is only 2 percent, and in Hungary, Latvia, and Lithuania, it is 5 percent. In addition the government has imposed a "clawback" tax of 5 to 11 percent on pharmaceutical sales, which is effectively a tax on industry turnover.

Recommendations and Conclusions

270. **Develop and implement an integrated national medicines policy.** Before any further major modifications are made to regulatory and reimbursement frameworks, a comprehensive and integrated medicines policy could be developed, with clear objectives to address issues of sustainability, financing, and cost containment, good governance and transparency in decision-making, equity of access for and protection of vulnerable segments of the population, and increases in both technical and allocative efficiency.

271. Review the current reimbursement list. The reimbursement list needs a detailed review, with the objective of deleting those items for which there is little evidence of effectiveness or cost-effectiveness (such as gingko biloba). Until an HTA entity can be established, this review could be facilitated by requiring evidence that the drug is reimbursed for on the basis of an HTA in at least one other EU member state (and deleting it in the absence of such evidence). In addition, all products on the reimbursement list that have high unit costs and high volume could be reviewed to determine whether reimbursement can be restricted in terms of indications, patient populations, prior treatment modalities, treatment duration, and/or maximum quantities to ensure that they are being used cost-effectively. The MoH and the NHIH could consider giving prior authorization to all drugs for which the failure of another therapy is a prerequisite. This could be expedited by adopting the restrictions (if any) that are in place in the country from which the price has been referenced and requiring the negotiation of RSAs for all products for which expenditure exceeded a pre-determined threshold in the preceding financial year.

272. Introduce a health economic assessment (HTA) for drugs as a prerequisite for being included in the reimbursement List and consider establishing a simplified de facto process in the meantime. The introduction of an HTA as a prerequisite for adding a drug to the list is clearly a long-term objective. In the interim, a *de facto* HTA process could be introduced using a simple scoring mechanism related to the extent to which a medicine has been subject to HTAs and is reimbursed for elsewhere in Europe.

273. Introduce mandatory budget impact assessments and use of risk-sharing arrangements (RSAs) for all new medicines with anticipated high cost or high use. Budget impact assessments should be undertaken using epidemiological estimates and taking into account current and anticipated prescribing patterns. Uptake could be monitored with regular review of observed versus expected use. RSAs could include absolute expenditure caps (with rebates for use in excess of agreed estimates) and price-volume agreements (with reduced unit prices for use in less cost-effective settings) where use could not be easily limited to, or would not be desirable, outside the most cost-effective settings. This would increases the clarity of budget impact and discourage inappropriate promotion of drugs to prescribers and within the distribution chain.

274. Introduce consumer awareness campaigns regarding the safety and quality of generic medicines, the actual costs of medicines, and the opportunity for consumers to save money at the pharmacy by choosing generics. An awareness campaign is needed to create an atmosphere of unconditional acceptance for generic medicines among patients as well as prescribers. In addition, consumers can be educated to understand that the costs of medicines are in many cases significantly greater than their copayments (this can be reinforced by requiring the actual list price to be printed on the dispensing label). Consumers could also be made aware that for many medicines there is a generic option that involves minimum out-of-pocket cost at the pharmacy and that they are entitled to ask for and receive this.

275. Introduce flat copayments to increase affordability, certainty, and equity. The current co-payment structure is based on different levels of co-insurance. While cost is clearly a potential barrier to access, there is nevertheless substantial evidence that both the magnitude of and uncertainty regarding cost-sharing are having adverse effects on patients' adherence to their medication. The MoH could consider introducing two levels of fixed copayments that would be determined based on modeling to ensure cost neutrality. Lower copayments would be available to those beneficiaries who are currently exempt from health insurance contributions – in other words, pensioners on incomes of less than 700 RON/month, children and adolescents, and pregnant women. Medicines prescribed and supplied within the NHPs could not be exempted from copayments.

276. Introduce indicative individual prescribing budgets, while monitoring doctors' prescribing behavior and giving feedback to prescribers. The 2011 Framework contract includes a provision for introducing indicative prescribing budgets for both GPs and specialists. The NHIH has developed an algorithm for determining individual practitioner budgets based on their prior prescribing practices and patient characteristics (to be provided). Without sophisticated risk adjustment processes, these budgets could remain indicative only; they could be supported by appropriate feedback to prescribers and could not involve any sanctions.

277. A key component of this process must be giving constructive feedback to prescribers about their prescribing practices and could focus on the extent to which they are prescribing cost-effectively rather than extent to which they can reduce their overall prescribing costs.

Where doctors are prescribing only benchmark-priced products in standard quantities, any further reduction in their overall prescribing may lead to the under-treatment of their patients.

5.2. Human Resource Management

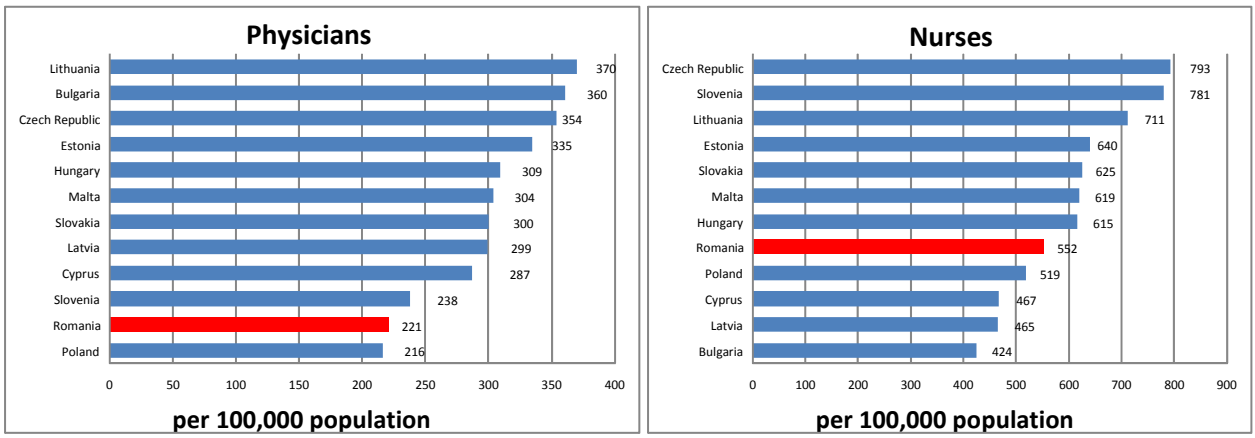
278. Human resources are a key component of the resource function of health systems. The Tallinn Charter states that "Investment in the health workforce is critical, as it has implications not only for the investing country but for others due to the mobility of health professionals; the international recruitment of health workers could be guided by ethical considerations and cross-country solidarity, and ensured through a code of practice."[82] The Ministry of Health in Romania is currently developing a human resources for health strategy that will, for the first time, outline a comprehensive strategy for the government. In this chapter, we highlight some of the key human resource challenges that Romania is facing in the health sector. It is not meant to be a comprehensive analysis as it focuses only on those issues that are most relevant to the functional review. Moreover, due to several constraints, the chapter focuses heavily on physicians rather than on the workforce in general.

Trends in the Physician and Nurse Workforce

279. For a number of reasons, including a lack of available information, some parts of this section focus more on physicians than on other professions in the health sector. Data from 2009 indicate that Romania has 221 registered MDs per 100,000 population. This is significantly lower than the EU average (324) and the average for the states who joined in 2005 (EU-12). In fact, only Poland has fewer doctors than Romania among the EU-12 countries. Romania also has below average levels of nurse compared to other EU-12 countries, although the gap is not as striking.

[82] The Tallinn Charter: Health Systems for Health and Wealth, http://www.euro.who.int/__data/assets/pdf_file/0008/88613/E91438.pdf

Figure 5.1: Number of Physicians and Nurses in EU-12 Member States, 2009



Source: European Health for All Database. http://data.euro.who.int/hfadb/

280. The number of health workers of all types, including physicians, in Romania has increased in the past few years. For example, in 2003, there were 216 physicians per 100,000 population but by 2008 that had risen to 235.

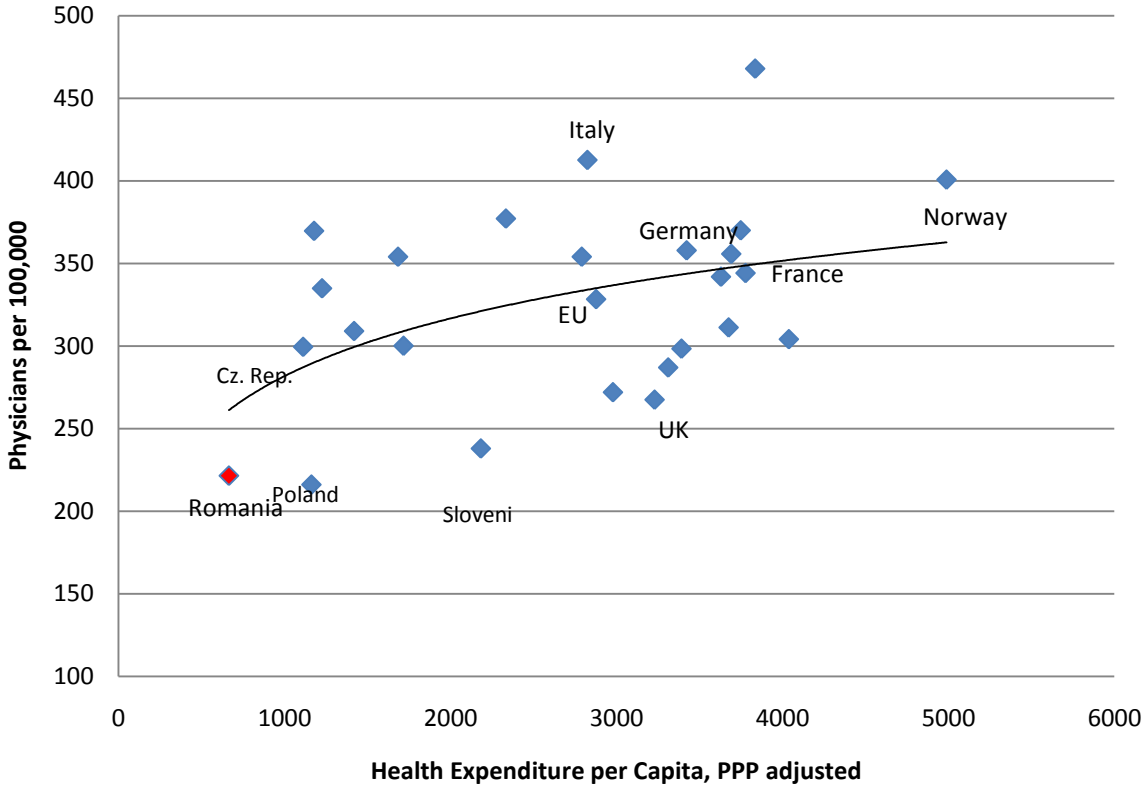
Table 5.1: Number of Health Workers per 10,000 Inhabitants, 1990-2008

	1990	1995	2005	2006	2007	2008
No. of doctors	41.813	40.112	47.388	46.936	48.199	50.267
- per 10,000 inhabitants	18,0	17,7	21,9	21,7	22,4	23,5
No. of dentists	6.717	6.045	10.249	10.620	11.651	11.901
- per 10,000 inhabitants	2,9	2,7	4,7	4,9	5,4	5,5
No. of pharmacists	6.286	2.646	9.283	9.932	11.108	11.704
- per 10,000 inhabitants	2,7	1,2	4,3	4,6	5,2	5,6
No. of middle sanitary personnel	131.949	128.460	123.455	126.613	136.353	132.464
- per 10,000 inhabitants	56,9	56,6	57,1	58,7	63,3	61,6

Source: Health Statistical Yearbook, MoH 2009

281. Romania has slightly fewer physicians per capita than might be expected in terms of the correlation between GDP and number of doctors in EU countries**.** However, because Romania has such a low level of per capita GDP, there are very few comparable countries within the EU. Poland actually has a slightly higher level of health expenditure per capita than Romania yet has a similar number of physicians.

Figure 5.2: Health Expenditure and Physician Density



Source: European Health for All Database. http://data.euro.who.int/hfadb/

282. Consistent with the predominance of hospitals in both service provision and financial terms, just over half of all physicians and nurses work in hospitals. This puts Romania in the middle of the pack in terms of EU-12 countries and slightly above average for the EU in general.

283. There are major geographic variations in the availability of physicians, nurses, and other health workers. Romania is becoming an urban-based society and in the process rural areas are being abandoned as has so often seen in the past in developed countries. Most physicians are concentrated in the big cities like Bucharest, Cluj-Napoca, Iasi, and Timisoara and in the most economically developed regions. In 2009, the number of physicians in rural areas was more than six times lower than in urban areas. On average, there are 379 physicians per 100,000 population in urban areas compared to only 58 in rural areas of Romania. The lowest coverage is in the least developed economic regions of Romania – the South (Muntenia), South-East, and North-East. The lowest coverage in rural areas is in North-East region (only 39.1 MDs per 100 000 inhabitants). This variation seems to show that the Romanian government is making a developmental choice that is biased in favor of the rich and the urban middle classes (which is a significant cause of the equity problems analyzed in Chapter 1 of this report).

284. To gauge what will happen to the physician workforce in the short to medium term, it is useful to explore trends in some of the main sources of inflows into and outflows from the physician labor market.

285. National medical schools remain the main source of new physicians in Romania. In 2009 3,700 students graduated from medical schools. The number of graduates has been declining steadily over the past few years. The last decade has also seen a major drop in the number of applicants for the medical schools from seven candidates per position to only one candidate per position in 2009. This clearly indicates that students' interest in pursuing a medical degree is diminishing, perhaps because of the lengthy specialist training required for medical doctors and because of the new opportunities offered by other occupations in Romania and in the EU.

286. There is very little information available on inflows from migration. While there are some migrant MDs from the Republic of Moldova working in Romania, mainly specialists in non-clinical fields such as epidemiology and public health, no registration list is available. The training periods for other specialties are too short in Moldova to be recognized in the EU. Indeed, due to the new EU rules for diploma recognition, it is unlikely that many non-EU medical doctors arrived in Romania after 2007 although some may have come to do their university training.

287. In terms of outflows, Romania has one of the highest physician out-migration rates in the EU-12, second only to Malta. In 2007, over 9 percent of all Romanian-trained physicians were practicing in other countries.

Table 5.2: Physician Migration Rates by Country of Training

Country of Training	Physicians in Country	Physicians Abroad	Physicians Abroad in EU Countries	Emigration Factor
Malta	1,254	376	328	23.1%
Romania	42,538	4,397	1,523	9.4%
Hungary	32,877	2,461	1,043	7.0%
Poland	95,272	6,568	3,130	6.4%
Slovakia	17,172	888	888	4.9%
Czech Republic	35,960	1,809	900	4.8%
Bulgaria	28,128	1,084	545	3.7%
Cyprus	1,864	48	48	2.5%
Latvia	6,940	172	129	2.4%
Lithuania	13,682	338	274	2.4%
Estonia	6,118	92	77	1.5%
Slovenia	4,475	44	44	1.0%

Source: Garcia-Perez et al (2007)

288. Interestingly, at that time, fewer than half of those practicing outside of Romania were located in EU countries. This trend is changing. Over 90 percent of physicians who left Romanian in 2007 went to another EU country (Dragomiristeanu et al, 2008). Clearly, joining the EU has had a major effect on the pattern of physician migration. A recent survey by the

Romanian College of Physicians found that 60 percent of doctors declared that they would like to emigrate from Romania – a remarkably high figure (Romanian College of Physicians, 2010).

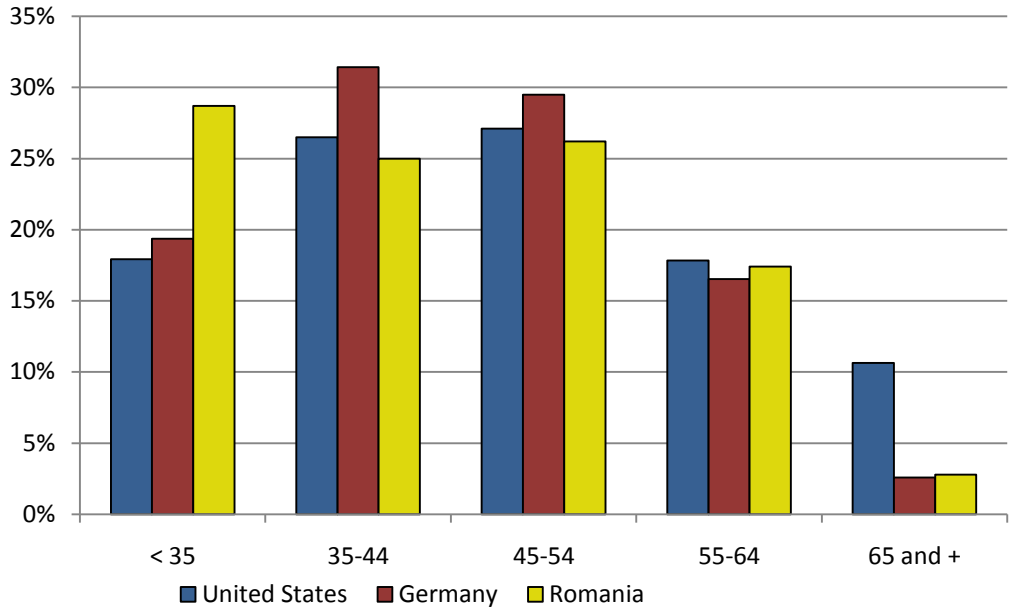
289. The Romanian region from where the most physicians emigrate is the North-East region, which is the most economically deprived in Romania. The most common medical specialties of these doctors were family medicine, intensive care, and psychiatry. France, Germany, Italy, and the UK seem to be the favored destination countries, which coincides with the high numbers of immigrant doctors reported by the destination countries. According to 2009 data from the French Medical Chamber, 1,000 Romanian medical doctors registered in France between January 2007 and July 2008 (CNOM, 2009). Between 2003 and 2008, the German Federal Medical Chamber reported the arrival of 927 foreign medical doctors from Romania (Federal Physicians' Chamber, 2009a), and the UK General Medical Council (GMC) counted 671 new registrants from Romania between those years. In Italy, 555 Romanian doctors were registered with the Italian Medical Association in 2009 (EMN, 2009).

290. The migration of physicians and nurses remains a major concern for policymakers. In a recent interview, the Minister of Health recognized that migration levels are on the rise and most likely will continue in the next 10 to 15 years.[83] He admitted that over 9,000 doctors have requested a verification certificate since 2007.

291. There is likely to be an increase in physician retirements in the coming years since half of the physician workforce is over 45 years of age. This is similar to, for example, Germany and the USA where retirement levels are creating concerns about the supply of doctors. An aging physician workforce is a common problem being faced by most OECD and several EU countries (OECD, 2008). According to Law 263/2010 concerning the public pension system, the official retirement age in Romania for all professions is 63 for females and 65 for males. In 2008, the Romanian College of Physicians issued a decision (no. 4/2008), accepted by all the competent bodies, that all MDs, regardless of gender, can continue to work up to the age of 65 provided that they obtain a yearly authorization from the College of Physicians. Moreover, family doctors living and practicing in rural areas can continue working up to the age of 70. There are also no incentives for MDs to retire early.

[83] http://www.realitatea.net/ministrul-sanatatii-migratia-medicilor-va-continua-in-urmatorii-15-20-de-ani_729148.html

Figure 5.3: Age Distribution of Physician Workforce

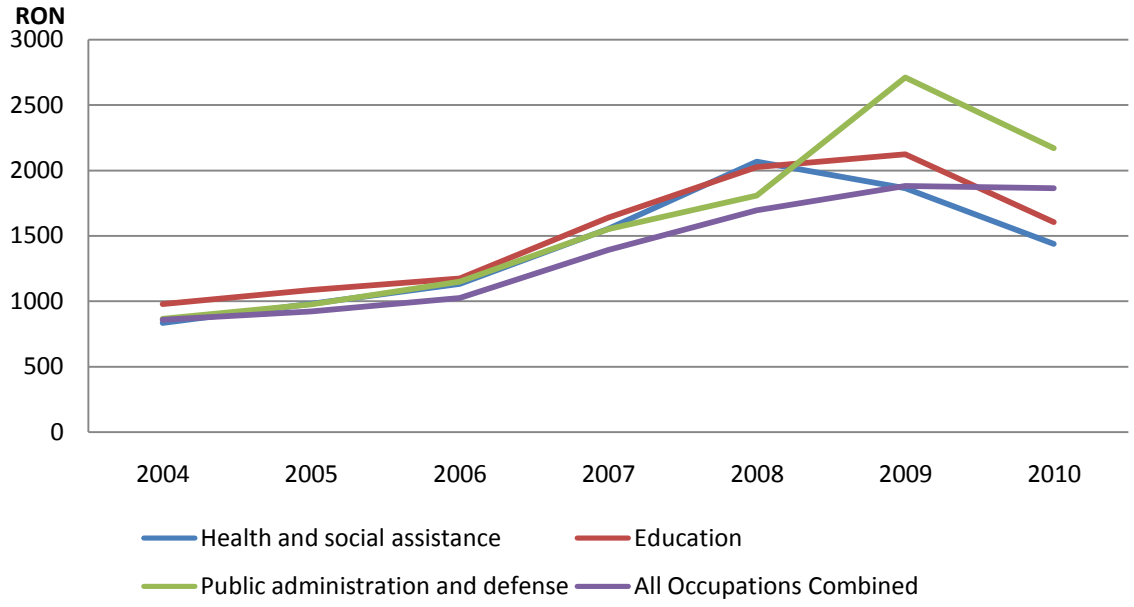


Source: OECD (2008); National Institute of Statistics, Health Units Activity, 2010

Physician Remuneration – Official and Unofficial

292. At the most aggregate level, the past few years have seen what may prove to be a significant development in terms of professional income levels for all personnel working in the health sector. The average income levels of personnel in the health sector have declined significantly relative to those in the education, public administration, and defense sectors. In 2008 income levels in the health sector were above the average for all sectors and above those in the education, public administration, and defense sectors as well, but by 2010 incomes in the health sector were the lowest among the three sectors.

Figure 5.4: Average Income for Selected Occupational Sectors in Romania



Source: National Institute of Statistics

293. Turning to physicians specifically, two common measures can be used to compare physician earnings across countries. The first is to adjust earnings for purchasing power. The second is to compare average physician earnings to economy-wide average income levels as measured by per capita GDP. Among a sample of countries for which comparable data are available, according to both of these measures Romanian physicians are paid far less, on average, than physicians in other countries. The average Romanian physician also earns about the equivalent of the per capita income level, whereas in the other countries a physician earns 1.6 times the per capita income level.

Table 5.3: Average Physician Income in Selected Countries

	Monthly US$ (2005) PPP Adjusted	As Share of per capita GDP
US	8,189	2.31
Taiwan	5,388	2.56
UK	5,210	1.91
Japan	4,594	1.82
Australia	4,164	1.53
Singapore	3,843	1.02
France	3,620	1.46
Finland	3,177	1.24
Italy	3,051	1.30
Portugal	2,936	1.12
Czech Republic	2,371	0.87
Romania	1,984	1.07

Source: US Department of Labor, National Statistics, China, UK Unemployment Department, Japan Statistical Yearbook, Australian Bureau of Statistics, Institut National de la Statistique et des Études Économiques, Statistics Finland, Instituto Nazionale di Statistica, Instituto Nacional de Statistica, Czech Statistical Office, Romania National Institute of Statistics.

294. However, Table 5.3 only shows the averages of official (formal) incomes. Physicians in Romania are paid differently depending on where they work. Hospital-based physicians are paid a salary based on revenues earned from payments adjusted by case mix and direct budget allocations from the government. General practitioners receive a combination of weighted capitation payments together with a fee for service for specific activities. This blended system is common in primary care in many countries. More details of the hospital and primary care payment mechanisms are given in Chapter 2. In this chapter, we simply highlight some of the key issues related to physician incomes in both hospitals and primary care settings.

295. The salaries of all staff working in hospitals (including physicians) are determined through Law 284/2010 (Official Monitor 877/28.12.2010), the framework law for the universal payment of public personnel. According to the law, a baseline value of the salaries of all public sector employees. is established annually by the Ministry of Public Finance and the Ministry of Labor (for 2011, the baseline value is 600 RON per month). Salary levels for each occupation are determined by applying a relative coefficient to this baseline value. For physicians in hospitals, the current coefficients are set out in Table 5.4.

Table 5.4. Coefficients for Determining the Salary of Physicians

Occupation	Coefficient
Senior (Consultant)	5.77
Specialist Doctor	4.51
Resident Doctor (year VI-VII of training)	3.99
Resident Doctor (year IV-V of training)	3.89
Resident Doctor (year III of training)	3.79
Resident Doctor (year II of training)	3.70
Resident Doctor (year I of training)	3.52
General Practitioner	3.61

Source: Law 284/2010 (Official Monitor 877/28.12.2010)

296. Hospital salary levels, therefore, are driven primarily by the level of training attained by the personnel with little adjustment made for performance or other factors. The highest physician salary is 3,462 RON per month (5.77 multiplied by 600 RON). It is important to also note that the salary scales in hospitals are national and are not adjusted for those geographic areas that have a hard time recruiting physicians. Hospital managers have little scope to introduce any new arrangements to adapt staffing to meet the hospital's needs.

297. Salary levels in hospitals decreased in July 2010 when a law was implemented mandating a 25 percent salary reduction for people working in public institutions (Table 5.4). The health sector was not excluded from this salary reduction initiative. In January 2011, public sector salaries were increased but not to their previous levels.

Table 5.4: Monthly Physician Salaries in Hospitals, RON

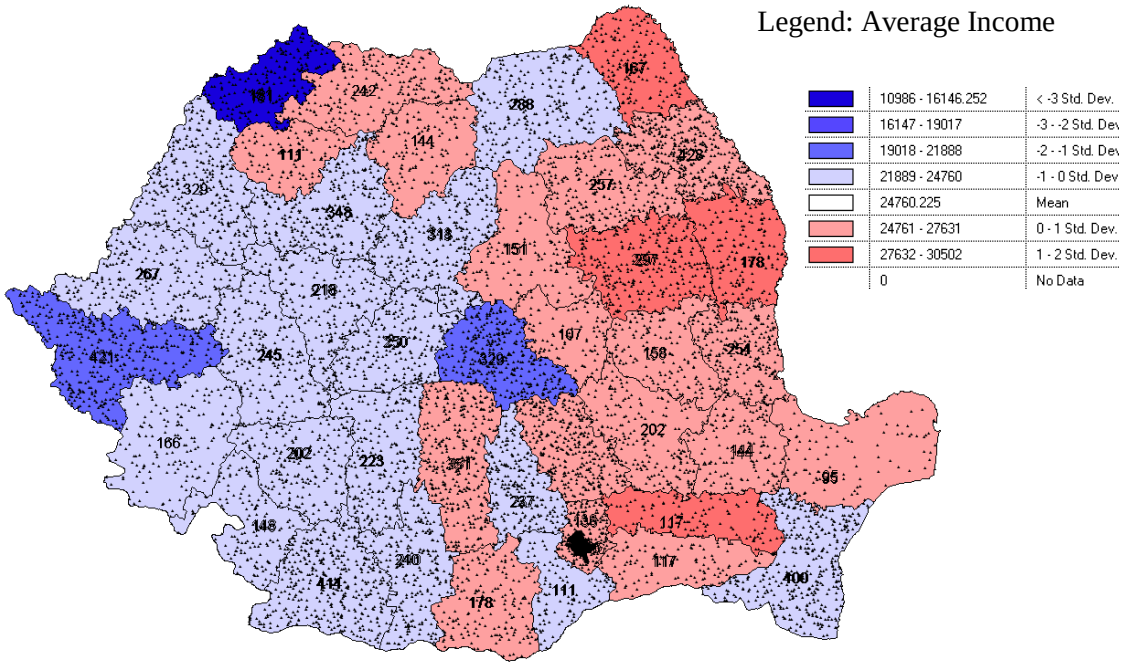
Category	Salary June 2010	Salary July-December 2010	Salary 2011
Consultant doctor, highest professional level	3.254	2.441	2.808
Consultant doctor, PhD	3.584	2.688	3.092
Consultant doctor (level 5), also working in duty shifts	3.254 + 14,8 x #. hours on duty shifts	2.441 + (11,1 x # hours)	2.808 + (12,8 x # hours)
Consultant doctor (lower level)	2.829	2.121	2.525
Specialist doctor (average level)	2.664	1.998	2.397
Resident doctor year VI-VII of training	2.035	1.526	1.729,5
Resident doctor year IV-V of training	1.833	1.374,8	1.649,7
Resident doctor year III	1.715	1.287	1.650,8
Resident doctor year II	1.533	1.149,8	1.379,7
Resident doctor year I	1.301	975,8	1.170,9

Source: Analysis of relevant legislation 2010-2011

298. Each year general practitioners are paid according to the Framework Contract that they sign with the National Health Insurance House and the Ministry of Health. According to the technical norms of the Framework Contract for 2010, general practitioners receive 70 percent of their total income from capitation and 30 percent from fees for service. Their income is calculated based on a points system. For the capitation portion, a total point value is calculated by multiplying the point value for specific age groups by the number of enrolled people in each age group. Beyond a certain number of enrolled patients, point values are discounted. This is to discourage over-enrolling. For the fee for service portion, each service has a certain point value, and each year the MoH sets the payment level per point. Due to budget overruns within the National Health Insurance House, payments made to general practitioners are often scaled back in the fourth quarter. In other words, the payment level per point is reduced at the end of the year to adjust for budget overruns. This means that general practitioners have to ensure significant uncertainly about the actual level of their incomes and reduces their financial incentive to provide care in the fourth quarter.

299. Information on the incomes of individual general practitioners is available through the National Health Insurance House. The average income for general practitioners for the third quarter of 2010 was 24,760 RON or 8,253 RON per month. Looking more in depth at the richer disaggregated data that are available, there is significant geographic variation in income. For example, the lowest average incomes were recorded in the Central and Western districts of the country and in the districts in Moldova (excluding Botosani, Bacau, and Vaslui). Clearly, it is hard for physicians to generate an income in the western counties in Romania. Interestingly, our analysis indicates that income variation among general practitioners is correlated with but not fully explained by the number of enrolled patients. Even with the same number of patients per physician, there are still significant variations in income levels geographically.

Figure 5.5: Average Income of GPs in Romania, Quarter III of 2010



Notes: 1 dot = 1 GP, and figures represent no. of GP in district;
Bucharest = 853 GPs with 25547 RON as total income

300. The Framework Contract establishes some incentives to attract general practitioners to work in deprived areas – defined as a place where the district health authority has made several documented attempts to attract a general practitioner with no success). The adjustment is made by allocating a "point premium" to physicians who choose to practice in those areas. It is unclear whether the point premium formula is succeeding in alleviating the rural area shortage.

301. There is also a system of incentives regulated by the Ministry of Health, consisting of cash and in-kind benefits to be distributed by the health authorities and the local authorities. These incentives include an increase in wages of up to 20 percent according to the Ministerial Ordinance 547/2010, facilities for transportation, and a reduction in some local taxes. However, it is important to note that official salaries in hospitals are set at the national level with no adjustments made for rural location or whether there is a shortage of doctors. The Ministry of Health may wish to explore alternatives, such as a mixture of financial and non-financial incentives. Further analytical work is needed to explore which combination of incentives would be most cost-effective for increasing the recruitment and retention of physicians in rural areas.

302. An important development is the proposed law on co-payments that is expected to generate around 750 million RON for the health sector. Out of this sum, around 160 million RON are estimated to be collected through general practice services, 205 million from specialized health services in ambulatory care, 324 million from hospital care, and the rest mostly from medical investigation tests. These estimates provide a basis for simulating the

overall impact of the proposed co-payment law on physician income – albeit in a very crude way.

303. If all co-payments collected at the primary care level remain with general practitioners (an upper limit), given that there are around 11,000 general practitioners in Romania, this would result in an additional 14,500 RON per year on average for each physician**.** This upper limit amount represents about a 15 percent increase in the income of general practitioners on average. For hospitals, the calculation is more challenging as not all co-payments that are collected will accrue to the physicians. Also, with differing salary levels within hospitals, it is impossible to make sensible estimates without more detailed data.

304. As noted in Chapter 2, informal payments are very common in Romania and are thought to be a major source of physician income. But how large are they relative to official income? It is extremely challenging to get reliable data on the amounts of informal payments accruing to physicians. However, a national survey done in 2010 by IMAS at the request of the Association for Implementing Democracy showed that 63 percent of patients offered informal payments to hospital-based physicians whereas only 20 percent offered them to general practitioners. The study found that the distribution of the amount offered to physicians was as shown in Table 5.5.

Table 5.5: Informal Payments Offered to Physicians

How much money did you pay at your last visit to a physician?	**% of respondents**
Less than 50 RON	46%
50 - 200 RON	26%
200 - 500 RON	10%
Over 500 RON	10%
Never offered money	7%

Source: "Romnibus" survey 2010, project Promoting Integrity in the Health Sector Association for Implementing Democracy AID/IMAS, (study available on request at office@aid-romania.org)

305. The largest amounts were paid in hospitals, and the majority of respondents declared that they offered the money in order to receive better treatment. Only 12 percent indicated that it was a token of appreciation for the care that they received.

306. Using the survey data for general practitioners and hospital-based physicians separately, it is possible to make very rough estimates of the average annual amount of additional income each physician receives in the form of informal payments. Using data on the number of physicians working in hospitals, the number of general practitioners, the number of hospital admissions, and the number of visits to general practitioners, our rough calculations indicate that general practitioners on average receive 350 RON per year in informal payments compared to 60,784 RON per year for hospital-based physicians. Even though these figures are estimates and may be unreliable, they clearly drive home a very important point – in Romania, physicians can earn much more from informal payments in

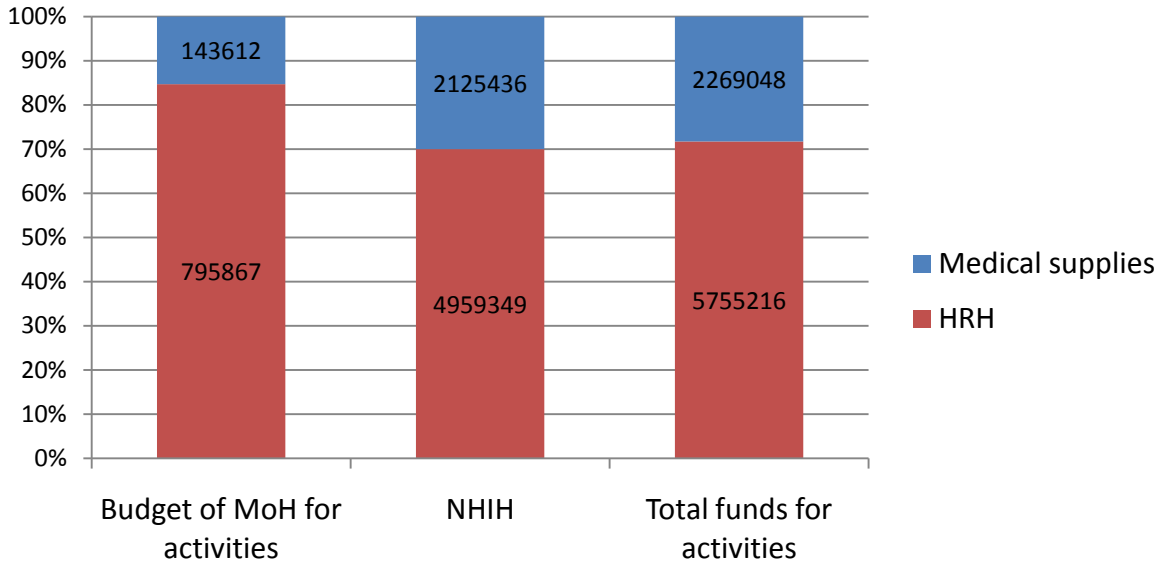
hospitals than in primary care. The informal payment system is providing physicians with a very strong financial incentive to work in hospitals as primary care provides far fewer opportunities for collecting informal payments.

Expenditure of Salaries in Hospitals, Referral Rates, and Activity Levels

307. As noted, Romania, by several measures, has very low staffing levels in the health sector. A key question though is whether there are fiscal resources available to support an expanded health workforce.

308. In 2010, the government passed a law stipulating that a maximum of 70 percent of a hospital's budget can be spent on salaries.[84] This law could have very important implications for hospital staffing levels. For example, according to the most recent data, about 50 percent of hospitals in Romania spent at least 70 percent of their budget on salaries in 2010. Put another way, the average expenditure level on salaries in hospitals is currently at 70 percent of the total budget. This suggests that if the new law limiting expenditure on salaries is enforced, these hospitals will have to reduce staff if revenues remain constant. However, according to the public declarations of the Minister of Health, if any staff are laid off, it will not be medical staff (doctors and nurses). Moreover, as the Ministry of Health's strategy is in fact to strengthen primary care service delivery, thus reducing the population's reliance on hospitals, some movement of staff out of hospitals and into primary care facilities would be desirable. Thus, it remains unclear how hospitals are meant to handle the salary expenditure reductions without laying off staff.

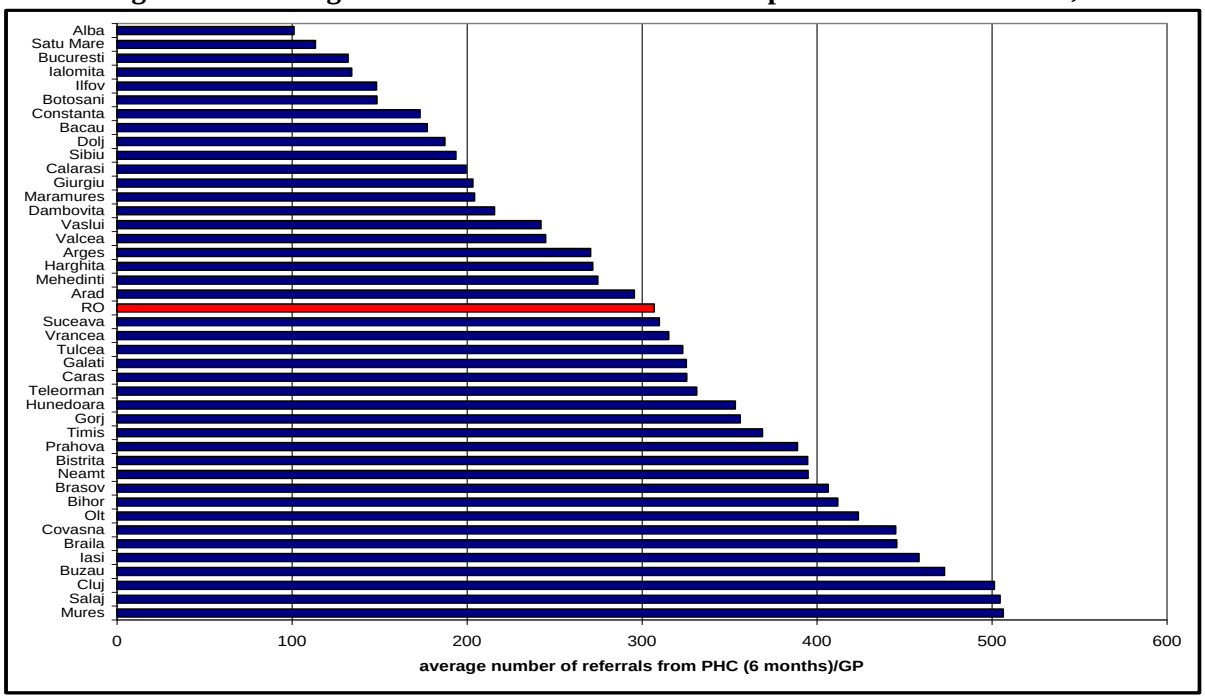
Figure 5.6: Hospital Expenditure by Categories, Romania, 2010 (thousands RON)



[84] Emergency Governmental Ordinance 133/2010 to modify Law 95/2006. Published in Official Monitor Partea I, Nr. 893/30.12.2010

309. At the national level, out of the 5,067,984 cases admitted in hospitals in 2010, only 1,211,109 (23 percent) were referred from family doctors. There are big differences in referral rates across districts and regions that deserve further study. In the Bucharest region, almost half of all admitted patients in hospitals are referred by their family doctors, as compared with Ialomita where only 3.8 percent have referrals. Generally speaking, it seems that in districts that are located in rural areas and have lower GDP per capita levels, the level of family doctor referrals is significantly lower than in other districts (for example, Tulcea has 4.7 percent, Vaslui has 6.2 percent, Gorj has 6.9 percent, and Bacau has 6.4 percent).

Figure 5.7: Average Number of Referrals from PHC per GP over Six Months, 2010



310. In terms of physician workload, a very rough measure for primary care doctors is the number of consultations per general practitioner per year. According to the most recent data available, Romanian physicians have a relatively low level of patient consultations compared to countries where comparable data are available. This might suggest that the current workload for general practitioners in Romania is not unmanageably high on average.

311. This provides further evidence that, within the primary care setting in Romania, the normative cap on the number of patients to be paid for in a working day imposed by the Framework Contract could be re-examined. The current system effectively sets a nominal daily workload of around 28 patient consultations, beyond which the point values are subject to the sliding scale of reductions. While this has a potentially positive dynamic – patients are nominally allocated more time for each consultation – in practice this is not necessary. As the data show, the workload in primary care in Romania is not unreasonably high compared to other countries.

Recommendations and Conclusions

312. **Review the legislation about what is allowed and what is not in relation to informal co-payments.** Given such low levels of official remuneration, informal payments have become common and now constitute a separate and parallel incentive structure for physicians over which policymakers have very little control. As noted above, a major aim of the Romanian health care reform is to shift the balance of health care provision out of hospitals and into primary care facilities where care can be delivered much more cheaply. However, we found that that informal payments – based on our very rough estimates – are much higher in hospitals than in primary care settings, in fact, several orders of magnitude larger. In other words, physicians can earn much more in informal payments by working in hospitals than in primary care facilities. This is extremely important and indicates that within the current system there is a strong built-in disincentive for physicians to give up hospital-based employment. In this report we were not able to carry out a full comparison of the income levels of general practitioners and hospital-based physicians because data on salary levels in hospitals are difficult to collect. However, our results clearly show that informal payments have the potential to dilute significantly the incentives built into the official remuneration strategy.

313. **Increase the scope for facility management, for contracting human resources and additional flexibility in salaries.** The universal pay law, the limit on salary budgets in hospitals, and the staffing norms law often work against each other and are not based on any clear integrated strategy. The current remuneration system within hospitals is nationally uniform. Within primary care, there is a system in which point levels can be increased for those districts that have difficulty recruiting physicians. It would be useful for the Ministry of Health to undertake analytical work to determine the effectiveness of its current efforts to recruit health personnel to work in unpopular areas and to incorporate international best practice into future policies. The Global Policy Recommendations on Increasing Access to Health Workers in Remote and Rural Areas through Improved Retention, a recent WHO-led initiative (WHO, 2010), may serve as a basis for a set of appropriate policies in the field of human resources in Romania.

314. **Design and implement a human resource information system.** Currently no single agency is responsible for monitoring key health workforce data, meaning that information on the Romanian health workforce is scattered among many different institutions. Moreover, it is necessary to pay to obtain some information (for example, from the National Institute of Statistics). Nor is there any system in place to monitor the external and internal mobility of the health workforce, and the existing data are extremely scarce and of poor quality in terms of both accuracy and completeness.

References

Chaloff J (2008). *Mismatches in the formal sector, expansion of the informal sector: immigration of health professionals to Italy*. Paris, Organisation for Economic Co-operation and Development (OECD Health Working Papers No. 34).

NHIH report for 2009 (http://www.casan.ro/informatii-publice/rapoarte-de-activitate, accessed January 2011)

CNOM (2009). *Atlas de la démographie médicale 2009. Situation au 1er janvier 2009*. Paris, Conseil National de l'Ordre des Médecins.

Dragomiristeanu A, Faracasanu D, Galan A (2008). Migratia medicilor din Romania [The migration of medical doctors from Romania]. *Revista Medica*, 17 March 2008 (http://www.medicalnet.ro/content/view/498/31/, accessed January 2011).

EMN (2009). *Politiche migratorie, lavoratori qualificati, settore sanitario [Migratory policies, qualified workers, health sector]*. Rome, European Migration Network Italy (First Report EMN Italy).

Federal Employment Agency (2009). *Statistik Beschäftigung*. Bonn (http://www.pub.arbeitsagentur.de/hst/services/statistik/detail/b.html?call=l, accessed January 2011).

Federal Physicians Chamber (2009). *Ärztestatistik*. Berlin (http://www.bundesaerztekammer.de/page.asp?his=0.3, accessed January 2011).

Galan A (2006). Health worker migration in selected CEE countries – Romania, Czech Republic, Serbia and Croatia. In: *Health worker migration flows in Europe: overview and case studies in selected CEE countries – Romania, Czech Republic, Serbia and Croatia*. Geneva, International Labour Office (ILO Working Paper No. 245).

García-Pérez *et al.* Physicians' migration in Europe: an overview of the current situation *BMC Health Services Research* 2007 **7**:201 doi:10.1186/1472-6963-7-201

Legea 118/2010 privind unele masuri necesare in vederea restabilirii echilibrului bugetar, Publicat in Monitorul Oficial, Partea I nr. 441/30.06.2010 (Law 118/2010- 25% cut on public salaries)

Legea 285/2010 privind salarizarea in anul 2011 a personalului platit din fonduri *publice*. Publicat in Monitorul Oficial, Partea I nr. 878/28.12.2010 (*Law 285/2010* -15% increase of salaries from public sources for 2011)

Law 263/2010 related to the public pension system and other social insurance rights. (Official Monitor no. 852/20.12.2010).

Legea 284/2010 Lege-cadru privind salarizarea unitară a personalului plătit din fonduri publice Publicata in Monitorul Oficial, Partea I nr. 877 din 28/12/2010 Law 284/2010 (standardizing salaries from public sources)

Ministry of Health - National Center for Public Health Statistics (2010). *Statistical Yearbook 2009*. Bucharest

Ministry of Labour, Family and Social Protection (2007). *Quarterly Statistical Bulletin*, no.**1 (57)/2007.**

Ministry of Labour, Family and Social Protection (2008). *Quarterly Statistical Bulletin*, no.**1 (61)/2008.**

Ministry of Labour, Family and Social Protection (2009). *Quarterly Statistical Bulletin*, no.**1 (65)/2009.**

National Institute of Statistics (2010). *Health units activity 2009*. Bucharest.

National Institute of Statistics (2009). *Statistical yearbook 2008*. Bucharest.

OECD (2008) The Looming Crisis in the Health Workforce: How Can OECD Countries Respond?, OECD, Paris.

Ordinul 77/2011 privind aprobarea Normelor metodologice pentru aplicarea *prevederilor Legii nr. 285/2010 privind salarizarea in anul 2011 a personalului platit din fonduri publice* (*Order 77/2011 - approving the methodological norms of the law 285/2010, regarding the 2011 salaries from public sources*)

Ordonanta de Urgenta nr. 133/2010 pentru modificarea si completarea Legii nr. *95/2006 privind reforma in domeniul sanatatii, in vederea eficientizarii unor institutii si activitati in acest domeniu,* Publicata in Monitorul Oficial al Romaniei, Partea I, Nr. 893/30.12.2010 (*Emergency Governmental Ordinance 133/2010* (amending the law *95/2006 „health sector reform"* -max 70% of the hospital budget allocated for salaries)

Realitatea.net (2010). Ministrul Sănătăţii: Migraţia medicilor va continua în următorii 15–20 de ani [Minister of Health: MDs' migration will continue for the next 15–20 years]. *Realitatea.net*, 12 August 2010 (http://www.realitatea.net /ministrul-sanatatii-migratia-medicilor-va-continua-in-urmatorii-15-20-de-ani_729148.html, accessed January 2011).

Romanian College of Physicians, 2010, unpublished report, available on request

"Romnibus" survey 2010, project „Promoting Integrity in the Health Sector Association for Implementing Democracy AID/IMAS, (study available on request at office@aid-romania.org)

RCP (2009). *Migratie medici* [*MDs' migration*]. Press release 18 February 2009. Bucharest, Romanian College of Physicians (http://cmr.ro/content/view/672/11/, accessed January 2011).

Tuffs, A. (2009) "Germany abolishes its compulsory retirement age for doctors." BMJ 2009; 338:b97 http://www.bmj.com/content/338/bmj.b97.full.

Vladescu C et al. (2008a). *Report of the Presidential Commission for Romanian Public Health Policies Analysis and Development*. Bucharest (http://www.presidency.ro/?lang=ro, accessed 22 June 2009).

Vladescu C et al. (2008b). Romania: Health system review. *Health Systems in Transition*, 10(3):90-94.

WHO (2009). European health for all database. Copenhagen, WHO Regional Office for Europe (http://data.euro.who.int/hfadb/, accessed 22 June 2009).

WHO (World Health Organization). 2010. *Increasing Access to Health Workers in Remote and Rural Areas through Improved Retention: Global Recommendations.* Geneva. http://www.who.int/hrh/retention/guidelines/en/index.html.

http://www.euro.who.int/en/home/projects/observatory/activities/research-studies-and-projects/prometheus

(http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&tableSelection=1&labeling=labels&footnotes=yes&language=en&pcode=tps00044&plugin=0

6. MAIN FINDINGS AND RECOMMENDATIONS FOR AN ACTION PLAN

315. This chapter presents the conclusions and main recommendations of this *Functional Review*. The Review uses the WHO framework, as embraced by the EU member states in the Tallinn Charter of 2008 [85]. According to this framework, health systems produce four types of outcomes -- health status, meeting people expectations, financial protection and fiscal sustainability. These outcomes are the result of the interaction of four "functions", or subsystems: stewardship, service delivery, financing, and resource management. Chapter I above examined the achievements of the Romanian health system in each of the four outcomes —and found significant shortcomings in each of these outcomes. Chapters II through V, above, analyze each of the four functions of the health system, identifying for each function a number of weaknesses that may contribute to producing the shortcomings identified in chapter I. Health system shortcomings, say in reaching the poor, improving health indicators or contributing to fiscal sustainability, are not the result of weaknesses in any individual function. Instead, they result from the interaction of weaknesses in several functions. In this chapter we summarize the findings of previous chapters, grouping our findings into a three-pronged strategy: the need to (a) improve governance and management, (b) streamline the service network and develop quality assurance systems, and (c) strengthen preventive services and increase equity in the system. Each of these challenges is discussed below. The chapter also includes recommendations and concludes with a matrix summarizing the recommendations in each of the challenge areas

Improve Governance and Management

316. Two sets of issues are included in this section: policy formulation and accountability and strengthening financial controls in health.

317. **Policy Formulation and Accountability.** Romania has already set out regulations to establish a modern policymaking process. Government Decision 775/2005 regulated the formulation and monitoring of public policies, Government Decision 1361/2006 covered the preparation of substantiation notes, and the Ministry of Health develops a Strategic Plan every two years. Despite these formal steps, we found shortfalls in the process of strategic planning. For example, the content of the Strategic Plan corresponds more to a business plan than a proper policy and strategy document. Also, we found that the process by which the 2011-2013 Health Strategic Plan was formulated was a one-way top-down channel developed by the Public Policies Unit (PPU) in the MoH under the direction of the Secretary General. The process was not used to encourage the exchange of ideas, and the documentation seems to be mostly written to fulfill budget-planning requirements. Neither the NHIH nor any other major stakeholder seems to have contributed to making these decisions, and what little data exist have not been sufficiently used in negotiating the National Framework Contract. No unit, department, or directorate within the MoH is responsible for health data analysis. The

[85] The Tallinn Charter: Health Systems for Health and Wealth, http://www.euro.who.int/__data/assets/pdf_file/0008/88613/E91438.pdf

30-strong analytical unit at the NHIH is mostly dedicated to checking the quality of financial information submitted by health care providers. In this review, we make a number of recommendations to improve the quality of policy formulation, including an open and inclusive policymaking process. While choosing the general direction for the sector is a key role played by the Minister of Health, its vision has to be openly and transparently communicated to citizens and other health stakeholders if it is to be successful. This can be done by: (i) making health priorities known to everybody through a proper policy document that is widely circulated among all health actors and the public and by setting up a Health Council/Commission to build consensus and implement proper policy proposals; (ii) reducing *ad hoc*, last minute legislation (emergency ordinances) as these often prevent health stakeholders from being able to contribute to policymaking; (iii) developing a proper communications strategy in the MoH that explains its vision and reform goals; and (iv) strengthening key departments in the MoH, particularly, the PPU, with sufficient numbers of staff with the right mix of skills in order to increase its policy and delivery capacity.

318. Following the recent decentralization of hospitals, accountability relationships in the Romanian health system have become more complex. Managers of these hospitals must now report to their district councils and city halls, to the MoH, and to the NHIH. The local authorities report to the Ministry of Interior and not to the MoH on the performance of the services that they manage. Hospital managers sign a contract with their district council or city hall according to which they may be removed if they fail to deliver their stated objectives. However, the local authorities have only limited capacity to hold hospitals to account. In addition, the legal framework that regulates the assignment of responsibilities to local governments is not very structured or integrated at the moment. The second layer of accountability for primary care, ambulatory, and hospital centers is to the MoH through district public health authorities. We found this relationship to be extremely weak. It will be crucial for the government to clarify, strengthen, or reassign accountabilities across the board, thereby increasing transparency. This clarification should reestablish the MoH's policy leadership role (as opposed to its administrative role) and should guarantee the autonomy of the NHIH in its health purchaser role (as opposed to its role simply as a payer), but promoting greater clarity about the NHIH accountability and more transparency across the board (by publishing its annual reports, auditing memos, and technical documents to strengthen its independent regulatory).

319. **Strengthening Financial Controls.** The evolution of health expenditures over recent years has demonstrated that, without careful control, expenditures can grow in an explosive way. In the short run, the challenge is to strengthen financial controls. Over the long run, the challenge is to develop systems capable of setting priorities for the use of new technologies and pharmaceuticals in ways consistent with available financing.

320. In 2009 and 2010, there was significant spending in the sector that exceeded the approved budget, mostly on pharmaceuticals and hospital services. Very significant arrears accrued, and for several months the full extent of the problem was unknown. Since then, the government, with the support of the IMF and the EU, has developed a number of measures to exercise more effective control over expenditures in health. In recent months, these have

included limiting the number of contracted hospital inpatients to 10 percent less than the 2010 level and reducing the price markup paid by the government for drugs in the national health programs. The government is also implementing an ambitious information technology system in the NHIH to monitor and increase the efficiency of health spending. Additional controls will be implemented in the near future, including: (i) providing indicative caps for quarterly services contracted with hospitals and physicians with incentives for physicians to remain within these prescribing ceilings; and (ii) reducing the number of compensated and free drugs approved in 2008 with a view to, wherever possible, moving towards generics.

An unusual feature of the Romanian health sector is the existence of massive National Health Programs. These programs have grown at a much faster rate than any other item in the health budget, a budget equivalent to almost one-fifth of total health expenditures and 2.3 times larger than the total budget for primary care. Three groups of programs are brought together in the National Health Programs. The first group consists of the preventive and promotional programs, which account for a very small proportion of the total financing. The second group consists of programs to combat communicable diseases, including HIV/AIDS and TB, which jointly account for about 10 percent of the budget of the National Programs. In many Eastern European countries these two groups of programs are centralized and are a high priority within the Ministries of Health. In Romania, there is a third group of programs that consists of high-cost, low-frequency conditions and treatments, and these now constitute the lion's share of the National Programs. These include cancer (31 percent of the total budget of the National Programs), diabetes mellitus (13 percent), organ and tissue transplants (2 percent), and kidney dialysis (23 percent). These programs are financed by the MoH and the NHIH and receive special treatment. Not only are they given a high budget priority but also they were exempted from cuts during the financial crunch of 2009. They are also exempt from rules requiring copayment by users and from the practice of favoring generics, and they tend to involve new high-cost technologies without a proper health technology assessment. In this functional review, we recommend first streamlining the national health programs to emphasize the prevention of NCDs and cervical cancer and the control of infectious diseases, while, second, turning the other national health programs that are currently financing high-cost, low-frequency interventions into a special catastrophic diseases fund with a clear budget ceiling and transparent rules for decision-making.

Financial controls must also be brought to bear on pharmaceutical expenditure, which is increasing faster than economic growth and faster than expenditure in the rest of the health system. As a result, containing costs and achieving value for money are ongoing challenges. In terms of cost containment, new technologies need to be subject to greater scrutiny, including the use of health economic assessments, mandatory budget impact assessments, and a transparent system of governance. Here, we propose: (i) developing and implementing an integrated national medicines policy; (ii) reviewing the current reimbursement list to delete items for which there is little evidence of effectiveness and cost-effectiveness and ensuring that medicines included in disease-specific subgroups are effective and cost-effective and have appropriate registered indications; (iii) introducing health technology assessments (HTA) as a prerequisite for drugs being included in the reimbursement list; (iv) introducing

mandatory budget impact assessments and use of risk-sharing arrangements (RSAs) for all new medicines with anticipated high cost or high usage; (v) introducing consumer awareness campaigns regarding the safety and quality of generic medicines, the actual costs of medicines, and the opportunities for consumers to save money at the pharmacy by choosing generics; (vi) introducing flat copayments to increase affordability, certainty, and equity; and (vii) introducing indicative individual prescribing budgets, while monitoring doctors' prescribing behavior and giving feedback to prescribers.

Streamline the Health Service Network and Re-launch Quality Control Systems

321. Romania inherited a large, obsolete, and distorted hospital sector, very few outpatient facilities, and a weak system of quality regulation from the old communist system. While some progress has been made in modernizing the network, there is still much that needs to be done as professional and financial incentives have continued to direct investments and human resources towards the provision of inpatient services.

322. Streamlining the network would involve re-shaping the existing institutions – which operate independently from each other – into networks capable of functioning within a system of referrals and counter-referrals. This would require classifying existing health service delivery facilities by levels and types and identifying tertiary-level centers that could become the heads of each referral network. It would also require reducing unnecessary inpatient health facilities, reshaping mono-profile hospitals, and reducing acute beds to a maximum of four per 1,000 inhabitants. As the supply of inpatient services is reduced, there will be a need to increase the supply of specialized ambulatory and day care services (these could function within hospitals, as satellite clinics, or independent facilities). Some of these actions may require adjusting, as needed, the existing EU-funded investment program for hospital rehabilitation and medical equipment.

323. The current payment systems create financial incentives that are contrary to the government's stated policy of reducing the use of inpatient services and increasing the use of primary and specialized ambulatory services. Some examples include:

- Many primary care doctors are working only a few hours per day and could increase their volume of services substantially. This is partly due to the relatively small fraction of their income that is paid through fees for service, but mostly due to the normative cap on the number of patient visits for which they can charge per day. There are already plans to raise the fee for the service component of doctors' incomes from 30 percent to 50 percent, but unless the normative cap is also eliminated, they will not be able to respond to these incentives.

- Similarly, ambulatory specialists are reported to be highly under-used. This again is due to a cap on the number of points that they can earn per day of work and the lack of incentives for delivering ambulatory procedures.

- Doctors have no incentive to limit referrals as they can charge for each referral, they face no penalty for making excessive referrals, and they have no incentives to provide a wider range of services themselves than they do already.

- Doctors have no incentives to limit their prescribing practices to medical need or to favor generic or cheaper medicines.[86]

- Hospitals are paid based on the diagnosis-related group system (DRG) for inpatient services, which gives them an incentive to increase inpatient admissions. In 2006, 9 of the 20 most frequently observed DRGs were those that, in other countries, are treated routinely as ambulatory or day care services. These patients account for 15 percent of inpatients in Romania and could easily be treated in outpatient settings.[87]

- DRGs were supposed to foster competition, yet the NHIH claims it is forced to contract with all hospitals, regardless of cost or quality.[88]

- The technical building blocks for setting up positive incentives within the payments system are, to a large extent, already in place. Fees for service linked to capitation can achieve a balance between different levels of provision and ensure access for the whole population. DRG payments, if appropriately structured, can encourage the provision of ambulatory and day care instead of inpatient treatment. Changing the rules so that the NHIH no longer pays for readmissions, which is a proposal in the current framework contract, is a good example of such a refinement. Quality indicators can be added to refine these payments. There are many easily adaptable examples in other European countries. However, the constraints in the current framework contract that, in effect, limit the volume of activities of primary and outpatient specialists and the quarterly recalculation of points values might offset any potential benefits from adjusting the payment tariffs themselves.

324. In this regard, in this review, we suggest that the government: introduce incentives to strengthen and develop individual-based primary and secondary prevention and promotion services; to introduce incentives for patients to use ambulatory and day care services; and to eliminate all mandatory contracting, removing DRG adjustments by hospital and limiting services payments to the services that the hospitals should provide based on the to hospital classification (level within the network). We also support the implementation of a financial mechanism to pay for services provided through the referral network (letting the money follow the patients).

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[86] There are now plans to set an indicative ceiling to the value of prescriptions per prescriber and to develop financial incentives to encourage doctors to remain within those ceilings

[87] Some observers of the Romanian health system have criticized the use of "Australian weights" in the DRG system used in Romania. While we agree that this is a problem, we think this is a minor inconvenience compared with the much more serious problems discussed above. Our advice would be simply to make small incremental corrections to the existing weights that will not require extensive technical assistance.

[88] There are now plans to allow the NHIH to contract selectively with hospitals

325. The Functional Review found that the system of quality regulation is weak. The National Commission for Hospital Accreditation (NCHA) currently operates as an independent agency under the aegis of the office of the Prime Minister. It lacks the technical tools to measure quality and it works exceedingly slowly. The NCHA needs to develop protocols for carrying out performance appraisals of all levels of care (PHC, ambulatory centers, and hospitals). Also, in the new context of decentralization, it may be useful to review its autonomy and to speed up its activities. In parallel, the government could design performance appraisal protocols by levels of care (PHC, ambulatory centers, and hospitals) in accordance with the new service delivery maps, define and implement a technical audit scheme including incentives and penalties, and implement a formal mechanism to ensure that patients' voices on the issue of the quality of care are being heard.

326. Another key component of quality in the health system is the use of international clinical guidelines, which are algorithms that provide practitioners with guidance regarding diagnosis, management, and treatment in specific areas of health care. Each country needs to adapt these clinical guidelines to fit the context of its own health system, referral networks, and resources. The guidelines create what are known as care pathways, which provide detailed guidance for managing patients suffering from specific conditions over a given time period, including details of their progress and outcomes. In this way care pathways aim to improve the quality, equity, continuity, and co-ordination of care across the health system. We suggest that the government establish evidence-based Romania-specific protocols and implement a new procedure to create and update Romania's clinical guidelines by level of care. In addition, these Romanian protocols could be used to reform or establish the basic package of personal services so that it emphasizes not a positive list of diseases but rather equity and ease of access and use of "care pathways."

Increase Preventive Services and Equity.

327. As already indicated, Romania has a significant problem of poverty and equity. Among the EU countries, it ranked second in 2008 in terms of the proportion of the population at risk of poverty with 23 percent, just below Latvia with 26 percent (Eurostat).[89] Given this extensive inequality, it would be desirable for the government to develop specific policies to ensure that the poor have access to health care. In theory, Romania provides such protection by exempting those registered in the minimum income program from paying contributions and copayments. However, in practice this mechanism is insufficient as our analysis above has shown that the poor face significant problems in accessing health care, possibly because they cannot afford to make informal payments to providers. Data show that having a low income is a greater determinant of lack of access than living in a rural area. Our analysis also suggests that much of the subsidy provided by the government benefits the richer segments of the population who could probably afford private insurance so the

[89] This measures the proportion of the population earning less than 60 percent of the national median income per equivalent adult.

government would do well to consider ways to improve the targeting of its subsidies. The current legal exemptions are not effective given the need to increase incentives for providers and the existence of large informal payments (which are currently the *de facto* incentive for providers). The government can consider introducing explicit mechanisms (such as vouchers) that link its payments to health providers for the provision of effective services to the poor. In addition, the government should give careful thought to increasing private financing over the long term, including the development of private insurance for those who can afford it. We are also suggesting that the government review the legislation about what is and is not allowed in relation to informal co-payments, implement communications campaigns regarding the population's rights, co-payments, and what kind of payments are not allowed, and conduct audits and investigations.

328. Experience in other countries where the poor have limited access to health services suggests that expanding primary care can rapidly and substantially benefit the poor. As noted above, there are indications that preventive care is very weak in Romania. Both of these reasons suggest that it would make sense to increase the budget for primary health care (PHC) gradually but substantially. This increase could reach at least 10 to 12 percent of total health expenditure in no more than five years in order to create a financial and professional basis for family physicians to raise their profiles and prestige. Family doctors should be providing preventive services such as screening for the early detection of cancer, diabetes, and TB and need to be involved in caring for the elderly, especially in deprived areas, in small hospitals that have been specially converted for this use. Funds will also be needed to train family doctors, purchase new equipment, and hire additional staff such as secretaries and social assistants. In addition, we are recommending that the government design and implement Health in All Policies (cross-sectoral population preventive programs), including introducing legislation to reduce risk factors (for example, raising tobacco taxes and banning tobacco in public spaces), national communications campaigns, and targeted population-based and individual-based preventive interventions and programs to reduce highly prevalent risk factors and increase cancer screening, vaccination, and growth monitoring.

Recommendations for an Action Plan
Health Sector

Objective	Sequenced Actions	Links to Health Function/s	Impact Priority critical, high, enabling	Implementation Period < 6 months, < 18 months, > 18 months	Respon-sibility	Progress / Output Indicator	Target/ Outcome	Financial Resources
1. Improving governance and management								
1.1 Strengthen the MoH's ability to improve Policy Formulation and Accountability	1.1.1 Create a National Health Council/Commission to build consensus and implement proper policy proposals.	Stewardship	enabling	< 18 months	GoR/MoH	National Health Council / Commission legal appointment Meeting minutes	An open and inclusive policymaking process to develop a long-term vision for the health sector. Must include a Private Sector Development Strategy and a long-term horizon for public spending in health. Must explicitly involve co-payment policy, choice/competition.	0
	1.1.2 Design and implement a communication campaign (to citizens and other health stakeholders) explaining the sector vision and the reform being implemented.	Stewardship	enabling	< 18 months	GoR/MoH	Evaluation Media Coverage	The communication to citizens and other health stakeholders of the MoH's vision and the improvements that the change will introduce, thus progressively reducing public, stakeholders, and staff resistance to the changes.	€
	1.1.3 Increase staff (more/better/redistribution) within the MOH, especially in the Public Policies Unit (PPU). This strengthening would need to also include the agreements/contracts with the Public Health Institute to perform specific activities.	Stewardship HRH	high	< 6 months	GoF/MoH	HR appointed	Increased capacity within the MoH. Clear understanding of tasks and responsibilities; strengthen formal workflows, job descriptions, and internal operational manuals. Clear assigned roles for the Public Health Institute.	€
	1.1.4 Review the entire regulations to unambiguously locate responsibility for actions of all participants at center and local levels	Stewardship	enabling	< 6 months	GoF/MoH	Regulatory framework reviewed	Clarified accountabilities and increased transparency across the system. Clearly defined roles, functions, and responsibilities for all participants at	0

Objective	Sequenced Actions	Links to Health Function/s	Impact Priority critical, high, enabling	Implementation Period < 6 months, < 18 months, > 18 months	Respon-sibility	Progress / Output Indicator	Target/ Outcome	Financial Resources
							the center and local levels (MoH, NHIH, NCHA, district authorities, town halls, health care providers including institutes, and others).	
	1.1.5 Improve functional arrangements, to articulate the roles of decentralized health facilities. This includes a change in the role of the District Public Health Authorities/Units.	Stewardship	enabling	< 18 months	MoH/District Governments	New functional agreements define the role of local governments and scope for facility management	Rationalized service provision (and reduced fragmentation).	0
	1.1.6 Continue the NHIH as an independent agency, but make it more accountable. Important would he for NHIH to publish annual reports, auditing memos, technical documents upon which decisions are made, to strengthen its independent regulatory role. In addition, the NHIH should play a more fundamental role in releasing information to the public on the quality of health care delivered by identified providers.	Stewardship Financing	high	< 18 months	NHIH	Annual reports, auditing memos, technical documents, etc Recurrent release of information on the quality of health care delivered by identified providers	Increased accountability, preventing possible interference and capture from powerful lobby groups. The creation of incentives to improve quality.	0
	1.1.7 Clarify and increase the scope for facility management, reducing current regulations and allowing them to adopt new arrangements (including staffing norms).	Stewardship Service delivery	enabling	< 6 months	MoPF, MoH and District Govern-ments	Regulations that relate the number of staff to the number of beds removed. The introduction of more flexible and accountable contract agreements	The creation of the conditions needed to allow health facilities to meet demand and increase efficiency. Improved balance of human resources.	€

Objective	Sequenced Actions	Links to Health Function/s	Impact Priority critical, high, enabling	Implementation Period < 6 months, < 18 months, > 18 months	Respon-sibility	Progress / Output Indicator	Target/ Outcome	Financial Resources
						with specific staff.		
	1.1.8 Implement a health facility managers re-profiling scheme	Service delivery HRH	high	< 18 months	MoH and District Governments	SNSPMP's report and updated list of managers	A requirement that all secondary and tertiary level health facility managers successfully pass the SNSPMPS's test **[check]** (*Şcoala Națională de Sănătate Publică şi Management Sanitar*).	€
	1.1.9 To design and implement a human resource information system.	HRH	enabling	, 18 months	MOH	A human resources database system is in place and link with a recurrent accreditation system	The creation of mechanism to infom about the existing human resources and develop policies to improve management	€
1.2 Strengthening Financial Controls	1.2.1 Increase the Budget General Directorate staff, especially in the financial/- accounting compartment	Stewardship Financing	enabling	< 6 months	MoH	Appointment of additional staff in the financial/ accounting department	Increased staff capacity of the budget general directorate.	0
	1.2.2 Finalize the selection and appointment of the general director of the Budget General Directorate	Stewardship Financing	enabling	< 6 months	MoH	Appointment of new general director	Enhanced leadership and management of the budget general directorate.	0
	1.2.3 Finalize and approve all written internal control procedures by the Budget General Directorate	Stewardship Financing	enabling	< 6 months	MoH	Finalization of internal control procedures and Minister's approval	Increased control effectiveness, facilitated learning for new staff, and increased transparency.	€
	1.2.4 Increase MoH's internal audit capacity (staff and equipment)	Stewardship Financing	enabling	< 6 months	MoH	Reorganization as a directorate. Hiring of additional staff and allocation of more funds to internal audit	Increased internal audit capacity and increased management awareness of internal audit role and findings.	€
	1.2.5 Update the MoH's financial	Stewardship	enabling	< 6 months	MoH	Updating of	More effective planning, budgeting,	€

Objective	Sequenced Actions	Links to Health Function/s	Impact Priority critical, high, enabling	Implementation Period < 6 months, < 18 months, > 18 months	Respon-sibility	Progress / Output Indicator	Target/ Outcome	Financial Resources
	management software system (include ALOP and commitments data modules, improve reporting to MoPF, and add other needed modules)	Financing				financial management software system	accounting, reporting, and strategic decision-making.	
	1.2.6 Strengthen the hardware capacity of the financial management system (server and communications)	Stewardship Financing	enabling	< 18 months	MoH	Installation of new higher-capacity server and increase in bandwidth for communication	More effective planning, budgeting, accounting, reporting, and strategic decision-making.	€
	1.2.7 Modernize the system of credit openings	Financing	high	< 6 months	MoPF	Modification of public finance legislation and its implementation	Increased responsibility and accountability for the Minister of Health as per new Fiscal Responsibility Law.	0
	1.2.8 Enhance the implementation of IPSAS	Financing	high	< 18 months	MoPF	Modification of public finance legislation and its implementation	More effective planning, budgeting, accounting, reporting, and strategic decision-making.	€
	1.2.9 Adopt and implement the legislation on electronic signature	Stewardship Financing	high	< 18 months	GoR	Adoption of legislation on electronic signature and its implementation throughout entire public sector	Significantly reduced paperwork. Improved payment system and reduction of arrears. Increased responsibility and accountability.	€€
1.3 Developing health system management tools	1.3.1 Complete the implementation of a health information system/ integrated IT system	Stewardship	High	< 18 months	NHIH	IT system ad hoc and query reports	An IT system that: • Allows service identification by individuals • Links services to care pathways • Contains algorithms to identify questionable claims • Maintains databases of patients under chronic treatments	€€€

Objective	Sequenced Actions	Links to Health Function/s	Impact Priority critical, high, enabling	Implementation Period < 6 months, < 18 months, > 18 months	Respon-sibility	Progress / Output Indicator	Target/ Outcome	Financial Resources
							• Implements specific health prevention programs i.e. cervix cancer, and secondary prevention for NCD.	
1.4 Re-focusing the National Health Program	1.4.1 Streamline national health programs with an emphasis on the prevention of NCDs, cervical cancer, and control of infectious disease 1.4.2 Restructure the other national health programs that are currently financing high-cost, low-frequency interventions and turn them into a special catastrophic diseases fund with a clear budget ceiling and transparent rules for decision-making.	Service delivery Financing	high	> 18 months	MoH	Reduced number of national health programs A focus on the prevention of NCDs An increase in the percentage of women receiving cervical screening	Reduced prevalence of NCDs risk factors. Reduced SMR mortality rate for NCDs and Cervical Cancer. The creation of a catastrophic disease fund to finance high-cost low-frequency interventions.	0
1.5 Introducing measures for controlling pharma-ceuticals expenditure	1.5.1 Develop and implement an integrated national medicines policy	Stewardship Pharmaceuticals	critical	< 18 months	MoH/GoR	Review of the regulatory framework	The creation of a regulatory basis for a comprehensive and integrated medicines policy, with clear objectives to address issues of sustainability, financing and cost containment, good governance and transparency in decision-making, equity of access, and protection of vulnerable segments of the population. Increases in both technical and allocative efficiency.	€
	1.5.2 Review the current reimbursement list and a) delete items for which there is little evidence of effectiveness and cost-effectiveness; b) ensure that medicines included in disease-specific subgroups are effective and cost-effective and have appropriate	Stewardship Pharmaceuticals	critical	< 6 months	MoH	Removal of drugs for which there is little evidence of effectiveness or cost-effectiveness	A reduction in the use of drugs for which there is little evidence of effectiveness or cost-effectiveness.	0

Objective	Sequenced Actions	Links to Health Function/s	Impact Priority critical, high, enabling	Implementation Period < 6 months, < 18 months, > 18 months	Respon-sibility	Progress / Output Indicator	Target/ Outcome	Financial Resources
	registered indications.							
	1.5.3 Introduce health economic assessments (HTA) as a prerequisite for inclusion in the reimbursement list and consider establishing a simplified *de facto* process in the interim.	Stewardship Pharmaceuticals	critical	< 18 months	MoH/NHIH	Health economic assessment (HTA) being implemented for all new drugs	Containment of the expenditures on pharmaceuticals within the budget limits.	€
	1.5.4 Introduce mandatory budget impact assessments and use of risk-sharing arrangements (RSAs) for all new medicines with anticipated high cost or high usage.	Financing Pharmaceuticals	critical	< 18 months	MoH/NHIH	Mandatory budget impact assessment being implemented for all new drugs		€
	1.5.5 Introduce consumer awareness campaigns regarding a) the safety and quality of generic medicines; b) the actual costs of medicines; and c) opportunities for consumers to save money at the pharmacy by choosing generics.	Stewardship Pharmaceuticals	high	<18	MOH	Communication campaign implemented	Increased use of generic medicines.	€€
	1.5.6 Introduce flat copayments to increase affordability, certainty, and equity.	Financing Pharmaceuticals	high	>18	MOH	New copayment system in place	Increase affordability among the poor.	0
	1.5.7 Introduce indicative individual prescribing budgets, while monitoring doctors' prescribing behaviour and giving feedback to prescribers.	Stewardship Pharmaceuticals	high	< 6	MOH/NHIH	indicative individual prescribing budgets in place	Improve prescribing practices, increasing financial control	0
2. Streamline the Health Service Network and Re-launch Quality Control Systems								
2.1 Re-mapping health service delivery facilities	2.1.1 Classify health service delivery facilities by levels and types	Service delivery	high	< 6 months	MoH	MOH Web page including the list of classified - reclassified units	For 100% of the health facilities (hospitals and ambulatory care centers), a classification - reclassification that includes a list of the basket of the services each provides.	0

Objective	Sequenced Actions	Links to Health Function/s	Impact Priority critical, high, enabling	Implementation Period < 6 months, < 18 months, > 18 months	Respon-sibility	Progress / Output Indicator	Target/ Outcome	Financial Resources
	2.1.2 Identify tertiary level centers (heads of each referral network)	Service delivery	high	< 6 months	MoH	List of regional health networks and their respective tertiary hospitals functionally and legally established	Rationalized (less fragmented) service provision through effective health networks involving regional and local levels with tertiary hospitals on top of the pyramid, in the context of service delivery rationalization.	0
	2.1.3 Re-shape service delivery institutions as networks, including referral and counter-referral arrangements.	Service delivery	high	< 6 months	MoH			0
	2.1.4 Adjust, if needed, the investment program for hospital rehabilitation and medical equipment (EU funds).	Financing Service delivery	high	< 18 months	MoH + EU Funds	EU fund progress reports	Strengthening of the rationalized health service network	€€€
	2.1.5 Reduce (closing or reshaping) unnecessary/redundant inpatient health facilities	Service delivery	critical	< 18 months	MoH	Number of acute beds in contracted hospitals	A reduction in the stock of installed acute hospital beds to a rate of 4.5 per 1,000 inhabitants.	€
	2.1.6 Increase supply of secondary specialized ambulatory and day care services (within hospitals, as satellite clinics, or independent facilities)	Service delivery	critical	< 18 months	MoH	Ratio between ambulatory/day care services and in-patient services	Services provided through day care services and ambulatory surgeries reaching 10% of total in-patients services.	€
	2.1.7 Continue reducing acute beds to a maximum of 4 per thousand inhabitants.	Service delivery	high	> 18 months	MoH	Number of acute beds in contracted hospitals	A reduction in the stock of installed acute hospital beds to a rate of 4 per 1,000 inhabitants.	0
	2.1.8 Reshape mono-profile hospitals	Service delivery	high	> 18 months	MoH	Number of mono-profile hospitals	A reduction in the number of mono-profile hospitals existing outside the rationalized health networks.	€
	2.1.9 Identify potential 3x(1+1) schemes	Service delivery	enabling	< 18 months	MoH/local districts	Number of schemes identified	A reduction in duplication of services and in unnecessary spending and quality by achieving economies of scale.	€
	2.1.10 Implement and contract new types of centers created with 3x(1+1) schemes	Financing Service delivery	high	> 18 months	MoH/local districts	Number of schemes implemented and contracted		€€
2.2 Re-	2.2.1 Establish evidence-based and available-resources-based Romanian	Stewardship Service	enabling	< 18 months	MoH/NHIH	Number of evidence-based	Enhanced use of EBM (evidence-based medicine) to improve the	€

Objective	Sequenced Actions	Links to Health Function/s	Impact Priority critical, high, enabling	Implementation Period < 6 months, < 18 months, > 18 months	Respon-sibility	Progress / Output Indicator	Target/ Outcome	Financial Resources
packaging health services	protocols and implement a new procedure to create and update Romanian clinical guidelines by level of care ("care pathways").	delivery				guidelines and disease management protocols developed and adopted for the provision of services in the referral networks	quality and increase equity of service delivery through the system.	
	2.2.2 Reform the basic package of personal services emphasizing not a positive list of diseases but rather equity and effective access and use of "care pathways."	Stewardship Service delivery	high	> 18 moths	MoH/NHIH	Percentage of health facilities successfully passing the quality-oriented performance appraisals	Services applying EBM, Romanian health system structure and available resources.	€
2.3 Introducing refined incentive payments	2.3.1 Introduce incentives (including payment mechanisms) to strengthen and develop individual-based primary and secondary prevention and promotion services	Financing Service delivery	high	< 18 months	MoH/NHIH	New incentives in place	Increased prevention and services at primary level of care. Improvements in the "filter" role of primary care.	0
	2.3.2 Introduce incentives for patients to use ambulatory and day care services	Financing Service delivery	high	< 18 months	MoH/NHIH	Ratio between ambulatory/day care services and in-patient services	A reduction in inpatient-based services. Increased services, reduced costs, and reduced risk of hospital infections.	0
	2.3.3 Refine hospital contracting, eliminating all-hospital mandatory contracting, removing DRG adjustments by hospital and limiting services payments to hospital classification (level within the network)	Financing Service delivery	high	< 18 months	MoH/NHIH	Mandatory contract removed and standard updated DRG being applied by level of services in all contracts	Increased ratio of ambulatory diagnosis and treatment (as well as outpatient surgeries) to in-patients services. Removal of perverse incentives. Increase in result-oriented services.	0
	2.3.4 Implement financial mechanisms to pay services through the referral network (letting the	Financing Service delivery	high	< 18 months	MoH/NHIH	The new mechanism in place	Tertiary levels funded based on the population that they serve. Patients can "travel" to the referral	0

Objective	Sequenced Actions	Links to Health Function/s	Impact Priority critical, high, enabling	Implementation Period < 6 months, < 18 months, > 18 months	Respon-sibility	Progress / Output Indicator	Target/ Outcome	Financial Resources
	money follow the patients)						network while the money follows the patients.	
2.4 Institutiona-lizing quality-oriented performance appraisals	2.4.1 Review the legal framework regarding the National Commission for Hospital Accreditation. The focus of this agency should be concurrent quality-oriented performance appraisals. In the context of the decentralization process, its autonomy should also be reviewed.	Stewardship Service delivery	enabling	< 18 months	MoH/GoR	New legal framework approved	Quality-oriented performance appraisals being performed on a regular basis. (Currently the hospitals have 4 years to apply for the first accreditation. After this, they should be closed down.)	0
	2.4.2 Design performance appraisal protocols by levels of care (PHC, ambulatory centers, and hospitals) as per the new service delivery maps	Stewardship Service delivery	enabling	< 18 months	MoH/GoR	New performance appraisal protocols for hospitals and ambulatory services approved	Increase in the use of standard tools to implement technical audits.	€
	2.4.3 Define and implement a technical audit scheme including incentives and penalties	Stewardship Service delivery	high	< 18 months	MoH/GoR	Timetable and reports of the technical audits	A progressive increase in quality control and equity in the health system.	€€
	2.4.4 Train staff in the care pathways by level of services	Service delivery HRH	high	< 18 months	MoH/Local Districts	Number of staff successfully trained	An increase in the proportion of staff applying the care pathways.	€
	2.4.5 Implement a formal mechanism to ensure that patients' and users' voices regarding quality are heard.	Stewardship	high	< 18 months	MoH/Local Districts	New mechanism implemented	Increased accountability and users' voice regarding access and quality. Improved service provision.	0
3. Increase Preventive Services and Equity								
3.1 Reducing health risk factors	Design and implement Health in All Policies (cross-sectoral population preventive programs), including legislation to reduce risk factors (e.g. tobacco taxes, banning tobacco in public space, etc) and national communications campaigns	Stewardship Service delivery	high	> 18 moths	MoH	Updated legal framework to reduce risk factors in place and communications campaign implemented	Reduced SMR mortality rate for NCDs and cervical cancer.	€

Objective	Sequenced Actions	Links to Health Function/s	Impact Priority critical, high, enabling	Implementation Period < 6 months, < 18 months, > 18 months	Respon-sibility	Progress / Output Indicator	Target/ Outcome	Financial Resources
3.2 Improving primary care level	Increase PHC services and scope and quality of services allowed at this level by: • Increasing the PHC budget cap from 5% to at least 10%, • Increasing the proportion of the payment based on target services • Implementing continuous training programs based on the care pathways	Service delivery Financing HRH	high	< 18 moths	MoH/NHIH	Service report and audit reports produced	Increase to 50% of the number of services at the PHC level.	€€
3.3 Improving the targeting of government subsidies	3.3.1 Increase pro-poor interventions by reallocating resources currently used to universally finance 100% of a list of drugs to fund a larger set of services to a low-income population.	Financing	High	< 18 months	MOH	Updated list of drugs adopted	Increased access to good quality services. A reduction in vertical inequity among poor and vulnerable groups.	€
	3.3.2 Consider explicit mechanisms (such as vouchers) to target payments for health services in ways that expand the access of the poor to health care services	Financing	High	> 18 months	MOH/GoR	New mechanisms designed to target the poor population		€€
	3.3.3 Design targeted population-based and individual-based preventive interventions and programs to reduce high prevalent risk factors and increase cancer screening, vaccination and growth monitoring.	Stewardship Service delivery	High	> 18 months	MOH/District Government	New pro-poor programs designed, including communications campaign to increase prevention and health service demand		€€
3.4 Reducing Informal co-payments	3.4.1 Review the legislation about what is allowed and what is not in relation to informal co-payments	Stewardship	enabling	< 18 months	MoH/GoR	Regulatory framework reviewed	Reduced financial barriers to access to quality health care services.	0
	3.4.2 Implement communications campaigns regarding population rights, co-payments, and what kind of payments are not allowed	Stewardship	high	< 18 months	MoH/NHIH	Communication campaign implemented		€

Objective	Sequenced Actions	Links to Health Function/s	Impact Priority critical, high, enabling	Implementation Period < 6 months, < 18 months, > 18 months	Respon-sibility	Progress / Output Indicator	Target/ Outcome	Financial Resources
	3.4.3 Conduct audits and investigations	Stewardship	high	< 18 months	MoH/NHIH	Audits and investigation reports produced		€
3.5 Exploring options for sustainable processes to expand the sector	Develop a legal basis for introducing private insurance	Stewardship Financing	high	> 18 months	MoH/GoR	Regulatory framework reviewed	Private funds co-financing the health system through private health insurance (including both health services and drugs).	0

ANNEX 1. EQUITY IN HEALTH (DATA FROM HBS 2008)

Table 1: Prevalence of health problems (disability, chronic or acute diseases, or accidents) by quintile

Individuals who…	Q1	Q2	Q3	Q4	Q5	Total
Have a handicap *(%)*	2.3	2.2	1.9	1.8	1.4	1.9
Suffer from a chronic illness*(%)*	7.7	11.6	14.2	16	15.7	13
Were ill or had an accident in the reference month*(%)*	8.5	12.7	15.3	17.3	16.4	14
Were ill or had an accident in the reference month/suffer from a chronic illness/have a handicap*(%)*	10.6	15.4	17.9	20.3	20	16.9

Source: HBS, 2008

Table 2: Prevalence of health problems (disability, chronic or acute diseases, or accidents) by area

Individuals who…	Urban	Rural	Total
Have a handicap *(%)*	1.7	2.2	1.9
Suffer from a chronic illness*(%)*	14.5	11.3	13
Were ill or had an accident in the reference month *(%)*	15	12.9	14
Were ill or had an accident in the reference month/suffer from a chronic illness/have a handicap *(%)*	18.3	15.1	16.9

Source: HBS, 2008

Table 3: Prevalence of health problems (disability, chronic or acute diseases, or accidents) by poverty status

Individuals who…	Non-poor	Poor	Total
Have a handicap *(%)*	1.9	2.1	1.9
Suffer from a chronic illness*(%)*	13.5	5.2	13
Were ill or had an accident in the reference month *(%)*	14.6	5.4	14
Were ill or had an accident in the reference month/suffer from a chronic illness/have a handicap *(%)*	17.4	7.2	16.9

Source: HBS, 2008

Table 4: Percentage of individuals who did not seek care for check-ups, tests, or treatments, by quintile

Individuals who…	Q1	Q2	Q3	Q4	Q5	Total
Have a handicap	69.9	62.2	46.1	43.2	30.5	52.8
Suffer from a chronic illness	42.3	32	25.5	23.1	17.4	26.1
Were ill or had an accident in the reference month	41.1	31.4	24.8	23.9	17.9	26.1
Were ill or had an accident in the reference month/suffer from a chronic illness/have a handicap	47.9	36.6	27.9	25.9	19.5	29.5

Source: HBS, 2008

Table 5: Type of provider in the reference month for check-ups, tests, and treatments (%)

Persons who have a handicap	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
1. Nowhere	69.9	62.2	46.1	43.2	30.5	52.8
2. private office or policlinic with paid services	0.3	0.3	1.1	2.3	3.6	1.3
3. private office or policlinic with services covered by health insurance	0.5	1.1	1.5	1.1	2.9	1.3
4. family doctor or dispensary	26.4	31.4	46.4	50.4	58.6	40.6
5. specialist medical practice	3.2	6.7	7.3	6.3	18.4	7.6
6. hospital	1.1	0	3.9	1.7	4	1.9
7. sanatory	0.2	0.5	0	0	0.4	0.2
8. emergency ward	0	0	0	0.3	0.6	0.1
9. other places	0	0	0	0.3	1.2	0.2

Persons who suffer from a chronic illness	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
1. Nowhere	42.3	32	25.5	23.1	17.4	26.1
2. private office or policlinic with paid services	1.1	0.9	0.8	1.8	2.9	1.6
3. private office or policlinic with services covered by health insurance	0.2	0.8	0.7	1	1.7	1
4. family doctor or dispensary	53.3	62.8	68.6	70.2	74.9	67.7
5. specialist medical practice	4.1	4.7	6.7	10.3	13.1	8.5
6. hospital	0.7	1.7	1.8	1.9	2.9	1.9
7. sanatory	0	0.1	0.2	0	0.1	0.1
8. emergency ward	0	0	0	0.1	0.1	0.1
9. other places	0	0	0.1	0	0.1	0.1

Persons who were ill or had an accident in the reference month	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
1. Nowhere	41.1	31.4	24.8	23.9	17.9	26.1
2. private office or policlinic with paid services	1.2	1.5	2.5	3.6	5.3	3.1

3. private office or policlinic with services covered by health insurance	0.3	0.8	1.2	1.1	2	1.2
4. family doctor or dispensary	53.2	61.7	66.4	65.5	67.8	64.1
5. specialist medical practice	4.8	5.2	7.2	9.9	13.6	8.7
6. hospital	1.3	2	2.4	2.9	4.1	2.7
7. sanatory	0	0.2	0.2	0	0.1	0.1
8. emergency ward	0	0	0	0.1	0.1	0.1
9. other places	0.2	0.2	0.1	0.2	0.5	0.2

Persons who have any of the above problems	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
1. Nowhere	47.9	36.6	27.9	25.9	19.5	29.5
2. private office or policlinic with paid services	1.1	1.4	2.1	3.1	4.7	2.7
3. private office or policlinic with services covered by health insurance	0.3	0.7	1.1	1	1.8	1.1
4. family doctor or dispensary	47.3	57.2	64.2	64.5	68	61.8
5. specialist medical practice	4.2	4.9	7.1	10.5	14.2	8.8
6. hospital	1.1	1.7	2	2.5	3.4	2.3
7. sanatory	0	0.1	0.1	0	0.1	0.1
8. emergency ward	0	0	0	0.2	0.1	0.1
9. other places	0.1	0.2	0.1	0.2	0.4	0.2

Source: HBS, 2008

Table 6: Percentage of individuals who did not seek care in the reference month for check-ups, tests, or treatments, by area

Individuals who…	**Urban**	**Rural**	**Total**
have a handicap	45	60.1	52.8
suffer from a chronic illness	23.3	30.5	26.1
were ill or had an accident in the reference month	23.8	29.4	26.1
were ill or had an accident in the reference month/suffer from a chronic illness/have a handicap	26.3	34.4	29.5

Source: HBS, 2008

Table 7: Type of provider in the reference month for check-ups, tests, or treatments by area (%)

Persons who have a handicap	***Urban***	***Rural***	***Total***
1. Nowhere	45	60.1	52.8
2. private office or policlinic with paid services	1.9	0.8	1.3
3. private office or policlinic with services covered by health insurance	1.3	1.2	1.3
4. family doctor or dispensary	46.6	35	40.6
5. specialist medical practice	11.6	3.8	7.6
6. hospital	2.3	1.6	1.9
7. sanatory	0.2	0.2	0.2
8. emergency ward	0.3	0	0.1
9. other places	0.4	0.1	0.2

Persons who suffer from a chronic illness	***Urban***	***Rural***	***Total***
1. Nowhere	23.3	30.5	26.1
2. private office or policlinic with paid services	1.8	1.2	1.6
3. private office or policlinic with services covered by health insurance	1.1	0.9	1
4. family doctor or dispensary	69.8	64.3	67.7
5. specialist medical practice	10.8	4.8	8.5
6. hospital	2	1.8	1.9
7. sanatory	0.1	0.1	0.1
8. emergency ward	0.1	0	0.1
9. other places	0.1	0	0.1

Persons who were ill or had an accident in the reference month	***Urban***	***Rural***	***Total***
1. Nowhere	23.8	29.4	26.1
2. private office or policlinic with paid services	3.7	2.2	3.1
3. private office or policlinic with services covered by health insurance	1.3	1	1.2
4. family doctor or dispensary	65	62.7	64.1
5. specialist medical practice	10.5	6.1	8.7
6. hospital	2.8	2.6	2.7
7. sanatory	0.1	0.1	0.1
8. emergency ward	0.1	0	0.1
9. other places	0.3	0.2	0.2

Persons who have any of the above problems	*Urban*	*Rural*	*Total*
1. Nowhere	26.3	34.4	29.5
2. private office or policlinic with paid services	3.2	2	2.7
3. private office or policlinic with services covered by health insurance	1.2	1	1.1
4. family doctor or dispensary	63.9	58.6	61.8
5. specialist medical practice	11	5.6	8.8
6. hospital	2.3	2.3	2.3
7. sanatory	0.1	0.1	0.1
8. emergency ward	0.1	0	0.1
9. other places	0.2	0.1	0.2

Source: HBS, 2008

Table 8: Percentage of individuals who did not seek care in the reference month for check-ups, tests, or treatments by poverty status

Individuals who…	**Non-poor**	**Poor**	**Total**
have a handicap	51	79.5	52.8
suffer from a chronic illness	25.5	52.6	26.1
were ill or had an accident in the reference month	25.6	48.8	26.1
were ill or had an accident in the reference month/suffer from a chronic illness/have a handicap	28.8	59.3	29.5

Source: HBS, 2008

Table 9: Type of provider in the reference month for check-ups, tests, or treatments by poverty status (%)

Persons who have a handicap	Non-poor	Poor	Total
1. Nowhere	51	79.5	52.8
2. private office or policlinic with paid services	1.4	0	1.3
3. private office or policlinic with services covered by health insurance	1.4	0	1.3
4. family doctor or dispensary	42.1	18.2	40.6
5. specialist medical practice	7.9	2.3	7.6
6. hospital	2	0	1.9
7. sanatory	0.2	0	0.2
8. emergency ward	0.1	0	0.1
9. other places	0.2	0	0.2

Persons who suffer from a chronic illness	Nonpoor	Poor	Total
1. Nowhere	25.5	52.6	26.1
2. private office or policlinic with paid services	1.6	0.4	1.6
3. private office or policlinic with services covered by health insurance	1	0	1
4. family doctor or dispensary	68.2	44.6	67.7
5. specialist medical practice	8.6	2.9	8.5
6. hospital	2	0	1.9
7. sanatory	0.1	0	0.1
8. emergency ward	0.1	0	0.1
9. other places	0.1	0	0.1

Persons who were ill or had an accident in the reference month	Nonpoor	Poor	Total
1. Nowhere	25.6	48.8	26.1
2. private office or policlinic with paid services	3.2	0.4	3.1
3. private office or policlinic with services covered by health insurance	1.2	0	1.2
4. family doctor or dispensary	64.4	48.6	64.1
5. specialist medical practice	8.8	2.8	8.7
6. hospital	2.8	0	2.7
7. sanatory	0.1	0	0.1
8. emergency ward	0.1	0	0.1
9. other places	0.2	0	0.2

Persons who have any of the above problems	Nonpoor	Poor	Total
1. Nowhere	28.8	59.3	29.5
2. private office or policlinic with paid services	2.8	0.3	2.7
3. private office or policlinic with services covered by health insurance	1.1	0	1.1
4. family doctor or dispensary	62.3	38.6	61.8
5. specialist medical practice	9	2.2	8.8
6. hospital	2.3	0	2.3
7. sanatory	0.1	0	0.1
8. emergency ward	0.1	0	0.1
9. other places	0.2	0	0.2

Source: HBS, 2008

Table 10: Percentage of individuals who paid for health care among those who were ill/had an accident in the reference month, or suffer from a chronic illness/have a handicap

Individuals who paid for health care	%
Nothing	20
by receipt (only)	77
without receipt (only)	0.5
both by receipt and without receipt	2.4
Total	100
Total N (unweighted)	**15380**

Source: HBS, 2008

Table 11: Percentage of individuals who paid for health care among those who were ill/had an accident in the reference month or suffer from a chronic illness/have a handicap, by quintiles

Individuals who paid for health care	Q1	Q2	Q3	Q4	Q5	Total
Nothing	36.8	24.3	20.1	15.7	12.3	20
by receipt (only)	62.1	73.8	77.5	80.9	83.1	77
without receipt (only)	0.3	0.4	0.5	0.6	0.7	0.5
both by receipt and without receipt	0.8	1.5	1.9	2.8	3.9	2.4
Total	100	100	100	100	100	100
Total N (unweighted)	**1804**	**2763**	**3301**	**3795**	**3717**	**15380**

Source: HBS, 2008

Table 12: Percentage of individuals who paid for health care among those who were ill/had an accident in the reference month or suffer from a chronic illness/have a handicap, by area

Individuals who paid for health care	Urban	Rural	Total
Nothing	17.7	23.5	20
by receipt (only)	79.6	73.3	77
without receipt (only)	0.4	0.7	0.5
both by receipt and without receipt	2.3	2.6	2.4
Total	100	100	100
Total N (unweighted)	**8190**	**7190**	**15380**

Source: HBS, 2008

Table 13: Percentage of individuals who paid for hospitalization among those who were hospitalized in the reference month, by quintile

Individuals who paid for hospitalization	Q1	Q2	Q3	Q4	Q5	Total
Nothing	56.8	53.9	39.4	24.1	13.3	29.8
only by receipt	6.5	3.3	4.9	13.5	11.9	9.4
only without receipt	36.6	37.2	54	59.2	70.1	57.4
Both by receipt and without receipt	0	5.6	1.7	3.2	4.7	3.5
Total	100	100	100	100	100	100
Total N (unweighted)	**24**	**42**	**65**	**75**	**109**	**315**

Source: HBS, 2008

Table 14: Percentage of individuals who paid for hospitalization among those who were hospitalized in the reference month, by area

Individuals who paid for hospitalization	Urban	Rural	Total
Nothing	28.4	31.5	29.8
by receipt (only)	11.7	6.2	9.4
without receipt (only)	57	57.9	57.4
both by receipt and without receipt	2.9	4.3	3.5
Total	100	100	100
Total N (unweighted)	**155**	**160**	**315**

Source: HBS, 2008

Table 15: Percentage of individuals who paid for consultations, lab tests, or treatments among those who reported for check-ups, lab tests, or treatments sometime in the reference month, by quintile

Individuals who paid for check-ups, lab tests, or treatments,	Q1	Q2	Q3	Q4	Q5	Total
Nothing	94.7	93.1	90	85	78	86.4
only by receipt	3.6	4.7	7.9	11.7	18	10.7
only without receipt	1.4	2	1.7	2.7	3	2.4
Both by receipt and without receipt	0.2	0.2	0.4	0.6	0.9	0.5
Total	100	100	100	100	100	100
Total N (unweighted)	**1100**	**2008**	**2706**	**3165**	**3363**	**12342**

Source: HBS, 2008

Table 16: Percentage of individuals who paid for consultation, lab tests, or treatments among those who reported for check-ups, lab tests, or treatments sometime in the reference month, by area

Individuals who paid for check-ups, tests, treatments	Urban	Rural	Total
Nothing	85	88.6	86.4
by receipt (only)	12.2	8.3	10.7
without receipt (only)	2.2	2.6	2.4
both by receipt and without receipt	0.6	0.5	0.5
Total	100	100	100
Total N (unweighted)	**6805**	**5537**	**12342**

Source: HBS, 2008

Medicines

Table 17: Percentage of individuals who paid for or benefited from complete reimbursed medicines among those who were ill/had an accident in the reference month, or suffer from a chronic illness/have a handicap, by quintiles

	Q1	Q2	Q3	Q4	Q5	Total
% of individuals who paid or benefitted from complete reimbursed medicines	63.9	77.3	81.9	84	86.9	80.5
Percentage of individuals who paid for medicines	62.4	74.2	77.5	80.9	83.2	77.2
Percentage of individuals who benefitted from medicines with reimbursement	15.2	22.7	32.5	37.7	43.5	32.4

Source: HBS, 2008

Table 18: Average rate of reimbursement for medicines for the individuals who benefitted from this kind of discount and were ill/had an accident in the reference month, or suffer from a chronic illness/have a handicap, by quintile

Q1	Q2	Q3	Q4	Q5	Total
63.85	63.1	64.47	61.48	64.49	63.42

Source: HBS, 2008

Table 19: Health care costs, for all the households, by quintile

	Q1	Q2	Q3	Q4	Q5	Total
Payments for health care, prices December 2008	17.0	31.3	44.8	62.9	110.3	57.5
Reimbursements, prices December 2008	3.0	7.0	12.0	16.8	30.8	15.1
Reimbursements/ payments for health care *100	17.7	22.3	26.8	26.8	27.9	26.2
Payments for health care out of the total consumption (%)	2.1	2.8	3.3	3.9	4.6	3.8

Source: HBS, 2008

Table 20: Health care costs, for the households that have at least one member who was ill/had an accident in the reference month, or suffer from a chronic illness/have a handicap, by quintile

	Q1	Q2	Q3	Q4	Q5	Total
Payments for health care, prices December 2008	46.3	73.3	101.5	135.1	251.1	132.9
Reimbursements, prices December 2008	9.8	18.4	30.2	39.8	80.3	39.6
Reimbursements/ payments for health care *100	21.1	25.1	29.8	29.5	32.0	29.8
Payments for health care out of the total consumption (%)	5.4	6.4	7.4	8.3	10.4	8.5

Source: HBS, 2008

Table 21: Health care costs, for all households, by area

	Urban	Rural	Total
Payments for health care, prices December 2008	71.3	39.2	57.5
Reimbursements, prices December 2008	20.6	7.9	15.1
Reimbursements/ payments for health care *100	28.9	20.2	26.2
Payments for health care out of the total consumption (%)	4.1	3.1	3.8

Source: HBS, 2008

Table 22: Health care costs, for the households that have at least one member who was ill/had an accident in the reference month, or suffer from a chronic illness/have a handicap, by area

	Urban	Rural	Total
Payments for health care, prices December 2008	160.1	93.8	132.9
Reimbursements, prices December 2008	51.9	21.9	39.6
Reimbursements/ payments for health care *100	32.4	23.4	29.8
Payments for health care out of the total consumption (%)	9.2	7.1	8.5

Source: HBS, 2008

Table 23: Health care costs, for all the households, by poverty

	Nonpoor	Poor	Total
Payments for health care, prices December 2008	59.4	9.2	57.5
Reimbursements, prices December 2008	15.7	1.2	15.1
Reimbursements/ payments for health care *100	26.4	13.3	26.2
Payments for health care out of the total consumption (%)	3.8	1.4	3.8

Source: HBS, 2008

Table 24: Health care costs, for the households that have at least one member who was ill/had an accident in the reference month, or suffer from a chronic illness/have a handicap, by poverty

	Nonpoor	Poor	Total
Payments for health care, prices December 2008	135.6	28.8	132.9
Reimbursements, prices December 2008	40.5	5.2	39.6
Reimbursements/ payments for health care *100	29.9	18.0	29.8
Payments for health care out of the total consumption (%)	8.5	4.4	8.5

Source: HBS, 2008

Table 25: Share of individuals who did not seek health care when in need for checkups or treatments (by quintiles)

Year	Q1	Q2	Q3	Q4	Q5	Total
1996	48.1	43.7	41.1	33.3	34.5	39.1
2000	42.6	39.7	35	34	28.5	35
2004	48.2	38.7	31.7	28.6	25.8	33.1
2008	47.9	36.6	27.9	25.9	19.5	29.5

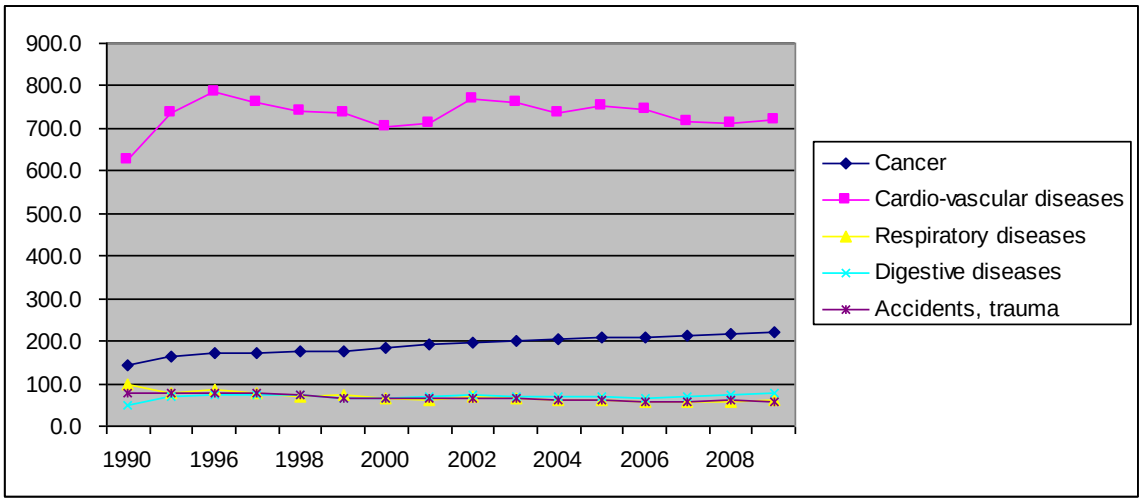
Source: World Bank using RHS data, 2008; PER 2010

ANNEX 2. TABLES ON SERVICE PROVISION IN ROMANIA 2011

	Life expectancy at birth (years)								
	Male			***Female***			***Both sexes***		
	1990	***2000***	***2008***	***1990***	***2000***	***2008***	***1990***	***2000***	***2008***
Romania	67	68	70	73	75	77	70	71	73
European Region	68	68	71	75	77	79	72	72	75
High income countrie	72	75	77	79	81	83	76	78	80
	Adult mortality rate in years (probability of dying between age and 60 years per 1000 population)								
	Male			***Female***			***Both sexes***		
	1990	***2000***	***2008***	***1990***	***2000***	***2008***	***1990***	***2000***	***2008***
Romania	239	237	220	114	106	90	177	173	156
European Region	215	229	208	97	98	90	157	165	149
High income countrie	155	129	113	77	67	61	117	98	87

Source: World Health Statistics 2010, WHO

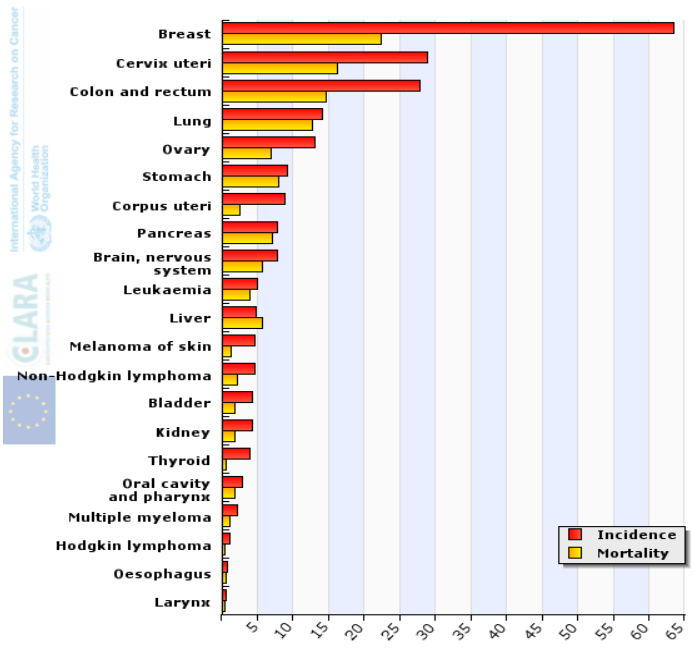
The evolution of mortality rate on main causes (per 100.000 inhabitants, 1990-2009



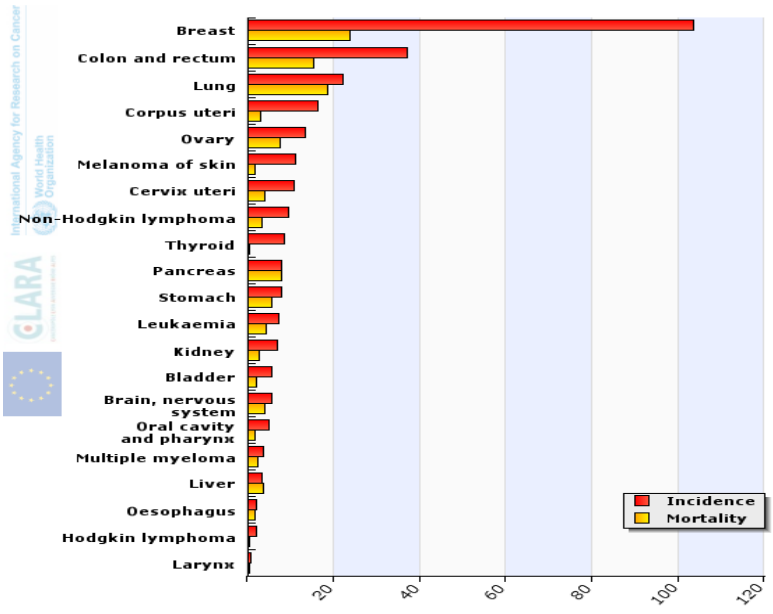
Source: Ministry of Health Statistics, 2010

	Infant mortality rate (years) (probability of dying by age 1 per 1000 living births)								
	Male			**Female**			**Both sexes**		
	1990	***2000***	***2008***	***1990***	***2000***	***2008***	***1990***	***2000***	***2008***
Romania	26	21	13	21	17	10	23	19	11
European Region	30	20	13	24	16	10	27	18	12
High income countri	11	7	6	9	6	5	10	7	6
	Under-5 mortality rate (years) (probability of dying by age 5 per 1000 living births)								
	Male			**Female**			**Both sexes**		
	1990	***2000***	***2008***	***1990***	***2000***	***2008***	***1990***	***2000***	***2008***
Romania	34	24	15	27	20	11	31	22	13
European Region	36	24	15	29	19	12	32	22	14
High income countri	13	9	8	11	7	6	12	8	7

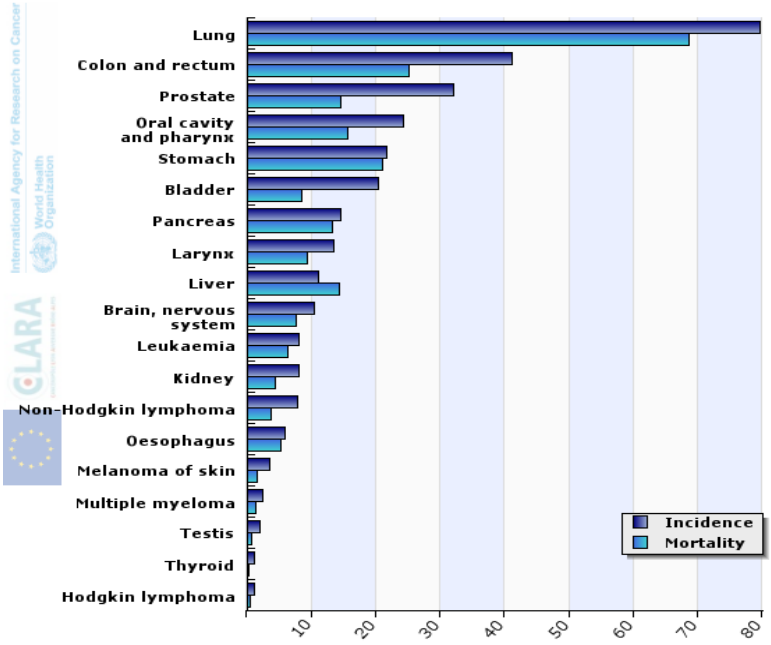
Source: World Health Statistics 2010, WHO



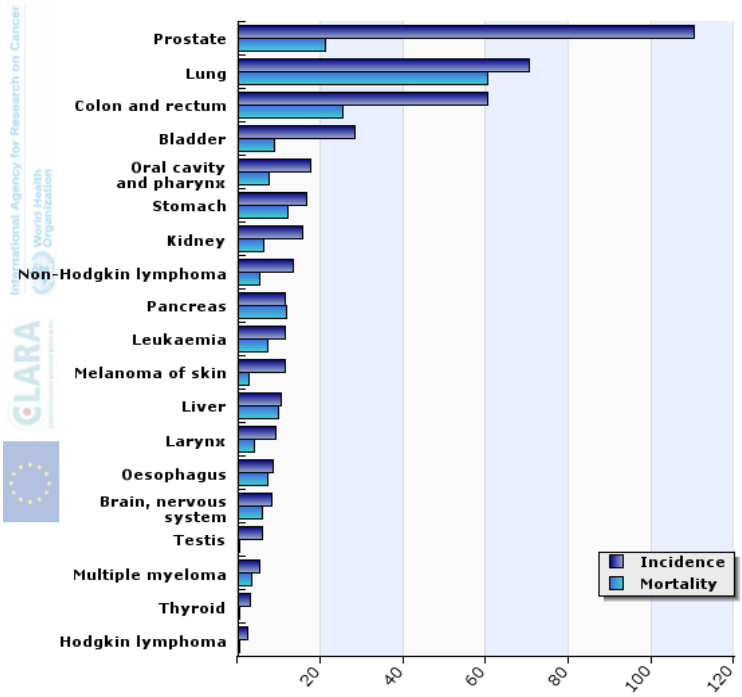
Romania (2008): Estimated incidence and mortality by sex: women ; Age Standardised Rate (European) per 100,000



European Union (27) (2008): Estimated incidence and mortality by sex: women ; Age Standardised Rate (European) per 100,000



Romania (2008): Estimated incidence and mortality by sex: men ; Age Standardised Rate (European) per 100,000

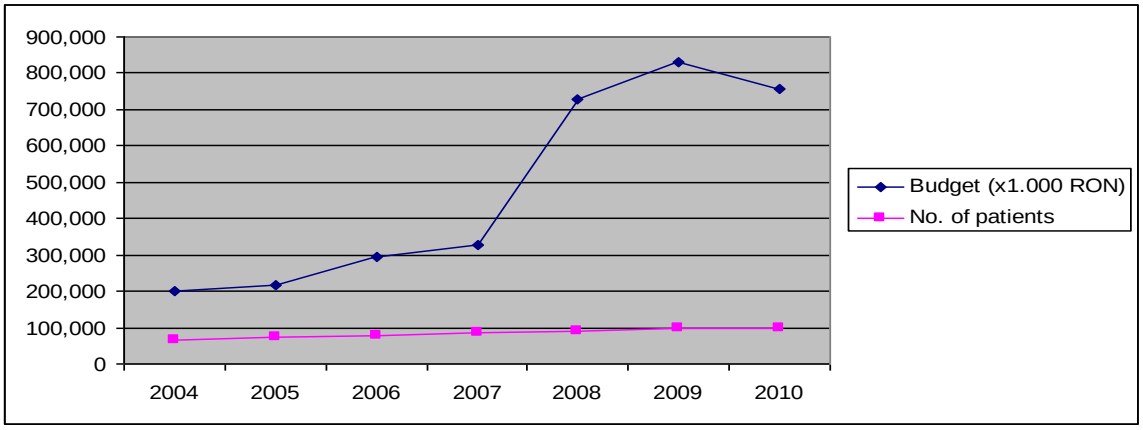


European Union (27) (2008): Estimated incidence and mortality by sex: men ; Age Standardised Rate (European) per 100,000

Cancer Indicators in Romania	**2007**	**2008**	**2009**
Number of new cases / year	59.886	60.557	60.693
Incidence (per 100.000 inhabitants)	278	281	283

Number of patients with cancer	364.312	384.972	402.328
Prevalence (per 100.000 inhabitants)	1,7	1,8	1,9
Mortality (per 100.000 inhabitants)	208,6	214,6	219,6

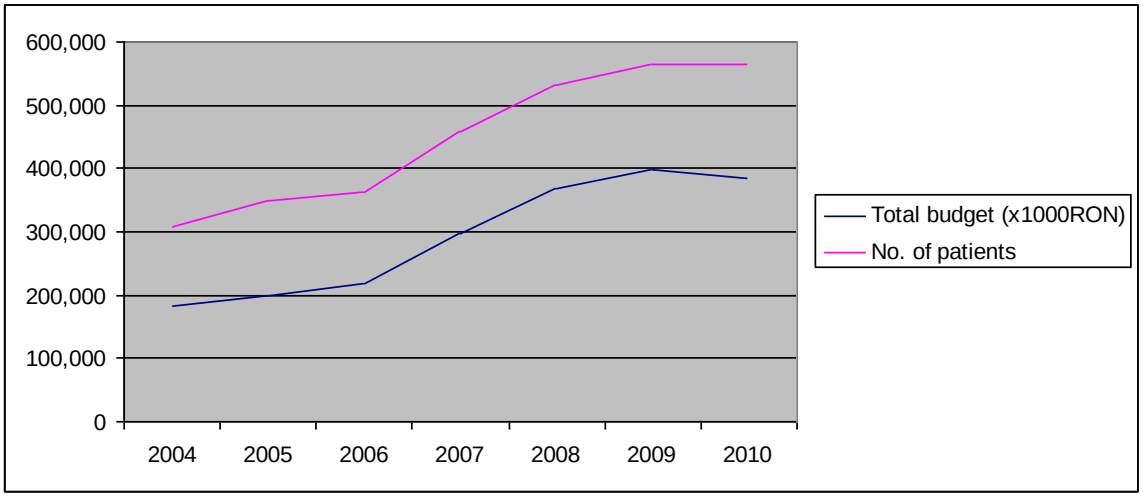
	2004	2005	2006	2007	2008	2009	2010
Total budget for cancer (x1.000 RON), of which	**202,226**	**215,132**	**293,152**	**327,151**	**728,202**	**830,573**	**796,608**
from: - NHIH	199,996	213,252	290,242	323,241	18,736	493,653	215,383
- MoH	2,230	1,880	2,910	3,910	709,466	336,920	581,225
No. of patients with treatment	66,604	73,547	75,826	84,033	90,474	96,951	



Diabetes Indicators	2007	2008	2009
Number of new cases / year	81.605	94.002	72.038
Incidence (per 100.000 inhabitants)	378,9	437,1	335,5
Number of patients diagnosed with diabete	577.201	643.410	703.324
Prevalence (per 100.000 inhabitants)	2,7	3,0	3,3
Mortality (per 100.000 inhabitants)	10,62	10,25	10,59

	2004	2005	2006	2007	2008	2009	2010

Total budget, of which:	**181,984**	**198,157**	**217,035**	**297,925**	**367,606**	**397,566**	**353,000**
- NHIH	177,974	193,677	211,718	267,625	23,610	19,051	
- MoH	4,010	4,480	5,317	30,300	343,996	378,515	
No. of patients, of which	309,257	349,890	363,131	457,530	530,482	564,896	
- with monitoring tests	5,100	5,300	10,000	53,000	61,225	130,400	



Value in RON of one point in the capitation reimbursement -this value in RON of one point in the fee-for-service reimbursement has a guaranteed minimal value and is adjusted every quarter, depending on the total budget allocated for these services and the no. of services provided in that period by all primary care providers.

	2007	**2008**	**2009**	**2010**
Capitation	2.38	4.66	4.25	
Fee-for-service	0.49	2.34	1.50	

PROGRAMS OF THE MINISTRY OF HEALTH

I. Public health programs for communicable diseases

1. Immunizations

The vaccines are purchased by the MoH (about 3 mil. vaccines/ year) and distributed to District Public Health Authorities and family physicians.

The vaccination coverage is over 95% for all types of vaccines listed below.

Recommended age	Vaccine	Comments
First day 1-7 days	Hep B BCG	In maternity
2 months	DTPa-VPI-Hib, Hep B	Simultaneous
4 months	DTPa-VPI-Hib	Simultaneous
6 months	DTPa-VPI-Hib, Hep B	Simultaneous
12 months	DTPa-VPI-Hib, RRO	Simultaneous
4 years	DTPa	
7 years	RRO	In school
9 years	VPO	In school
14 years	dT	In school

Budget: 45.463.000 RON – from MoH

2. Control of communicable diseases (HIV/AIDS, TB, STDs, flue)

STDs – activities for diagnosis and prevention of STDs, performed by the institutes of public health, dermatology hospitals, family physicians

Budget: 98.703.000 RON – from MoH

152.450.000 RON – from NHIH (for treatment)

3. Control of nosocomial infections and drug resistance

It provides funds for hospitals to detect nosocomial infections and drug resistance to certain drugs.

Budget: 2.203.000 RON – from MoH

II. Public health programs for control of environmental and work related risk factors

Budget: 6.058.000 RON – from MoH

III. Public health programs for security of transfusion

The program is implemented through blood centers and the main activities are promotion of blood donation, collection and control of blood, providing food tickets for donors.

Budget: 93.357.000 RON – from MoH

IV. Public health programs for non-communicable diseases

1. Cardiovascular diseases

The program provides surgical devices and materials for patients with cardio-vascular diseases (about 7.300/ year). The funds are allocated to cardio-vascular hospitals, for treatment of admitted patients (paid also through DRG).

Budget: 400.000 RON – from MoH (for a register)

55.491.000 RON – from NHIH

2. Cancer program

The main activities are:

a) HPV vaccination

b) screening for cervical, breast and colo-rectal cancer (the activities remained only an intention during the last 3 years)

c) providing drugs and monitoring tests for patients with cancer. The drugs are delivered through hospitals and pharmacies.

Budget: 1.385.000 RON (for HPV vaccination) and 270.311.000 RON (for treatment) – from MoH

493.645.000 RON – from NHIH (for treatment)

3. Mental health program

The program is implemented in hospitals and ambulatory centers for mental health and includes activities related to:

a) training of staff

b) occupational activities for patients with mental disorders

c) providing tests and treatment for patients with drug abuse (about 3.400/year).

Budget: 6.525.000 RON – from MoH

4. Diabetes program

The program provides drugs and blood sugar monitoring tests for patients with diabetes (about 565.000 patients with pharmaceutical treatment out of the total of 700.000 patients diagnosed with diabetes in 2009).

Budget: 2.764.000 RON– from MoH (for insulin pomp treatment)

341.600. 000 RON – from NHIH (for monitoring and treatment)

5. Transplant program

The program includes all activities related to transplant of organs, tissues and cells: prelevation and transport of organs, surgical procedures, pharmaceutical treatment after transplant.

Number of transplants	2006	2007	2008	2009	2010
- heart	1	4	6	8	16
- bone marrow (self-transplant)	28	60	91	79	130
- bone marrow (from a donor)	0	0	24	24	35
- kidney	157	220	227	207	272
- liver	17	29	43	28	60
- pancreas	0	2	0	36	10

Budget: 55.311.000 RON– from MoH

4.490.000 RON – from NHIH (for pharmaceutical treatment after transplant)

6. Rare diseases program

It includes activities related to early detection and treatment of rare diseases with high costs: Fabry disease, Prader Willi syndrome, Pompe disease, ostegenesys imperfecta, multiple sclerosis, etc. The list of diseases increases every year, the cost per patients is enormous (up to 30.000 Euros/year) and the program budget is not able to cover the costs encountered by all patients. ????

Budget: 32.857.000 RON– from MoH

65.496.000 RON – from NHIH

7. Emergency care program

The program provides financing for:

a) training of staff working in emergency care

b) maintenance for county emergency call-centers

Budget: 1.654.000 RON– from MoH

8. Diagnosis and treatment with high technology equipment

The program provides funds for the treatment of certain diseases using expensive, new technology: robotic surgery (about 150 patients/year), Gamma-Knife brain surgery (about 100 patients/year), internal ear implant, etc.

Budget: 50.330.000 RON– from MoH

9. Endocrinology program

The programs provides test for identifying thyroid dysfunctions induced by iodine deficit.

Budget: 3.195.000 RON– from MoH

6.597.000 RON – from NHIH (for treatment)

10. Registry for children with walking disabilities

Activity: developing a registry for children with walking disabilities.

V. Promotion of a healthy life style and health education, including:

1. information and education campaigns for a healthy life style

2. activities related to smoking prevention and abandon

3. surveillance of population health status

Budget: 6.315.000 RON– from MoH

VI. Public health programs for child & mother health

It includes more than 20 programs and sub-programs aimed at improving mother & child health:

- family planning
- improved health care services for pregnant women and after birth
- screening for genetic diseases
- improved health care services for new-born
- screening for hear and visual deficiencies
- promotion of breast-feeding
- prevention of malnutrition (providing milk powder)
- prevention of anemia, rachitis, neurologic and chronic diseases, etc.

The program had a good start in early 90-ties with visible impact on health indicators, but it spreaded in too many activities, in most cases overlapping the DRG payment, and with insignificant results.

Budget: 40.970.000 RON– from MoH

VII. Program for treatment abroad

The programs provides funds for diagnosis and curative services performed abroad for diseases that can not be diagnosed or treated in Romania and are not included in the health insurance package.

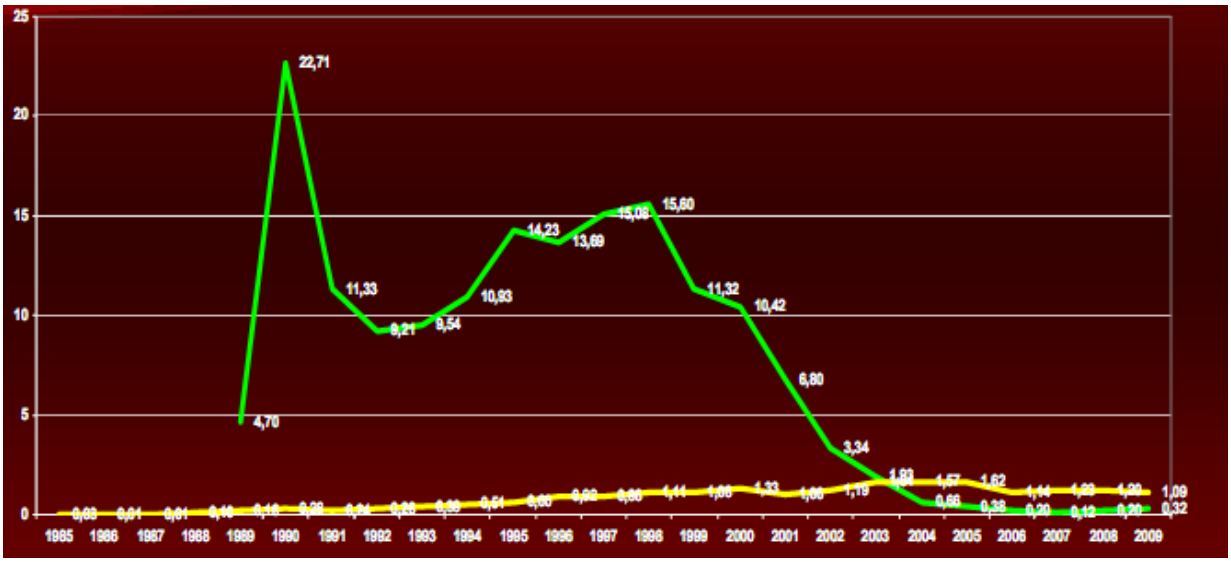
Budget: 20.950.000 RON– from MoH

VIII. Program for drug compensation

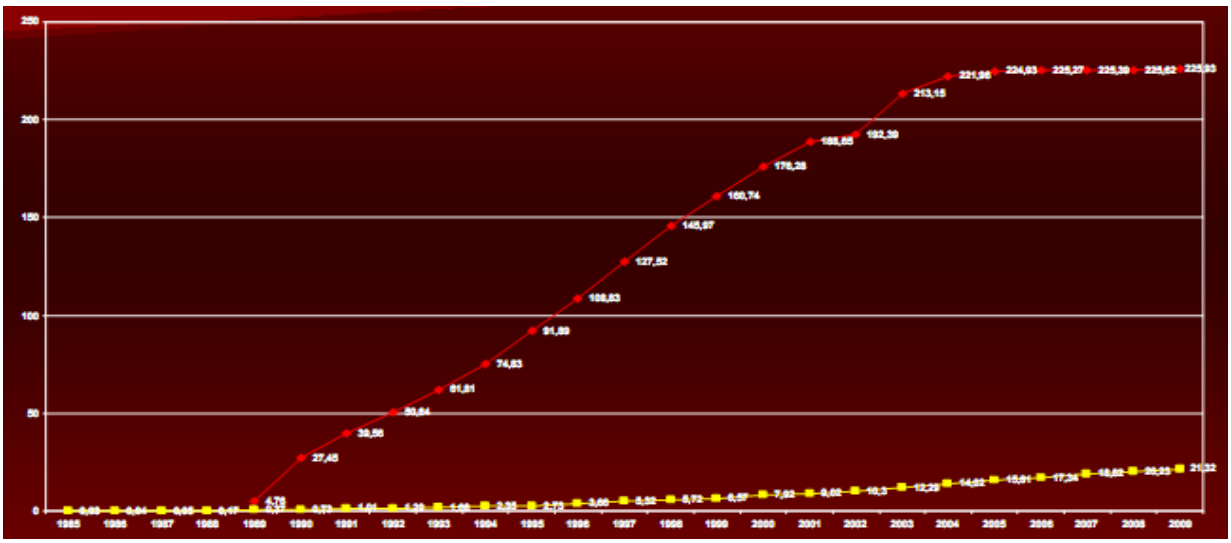
It provides funds for covering the personal contribution of the cost of pharmaceuticals, for retired people with a pension less than 700 RON/month.

Budget: 56.085.000 RON– from NHIH

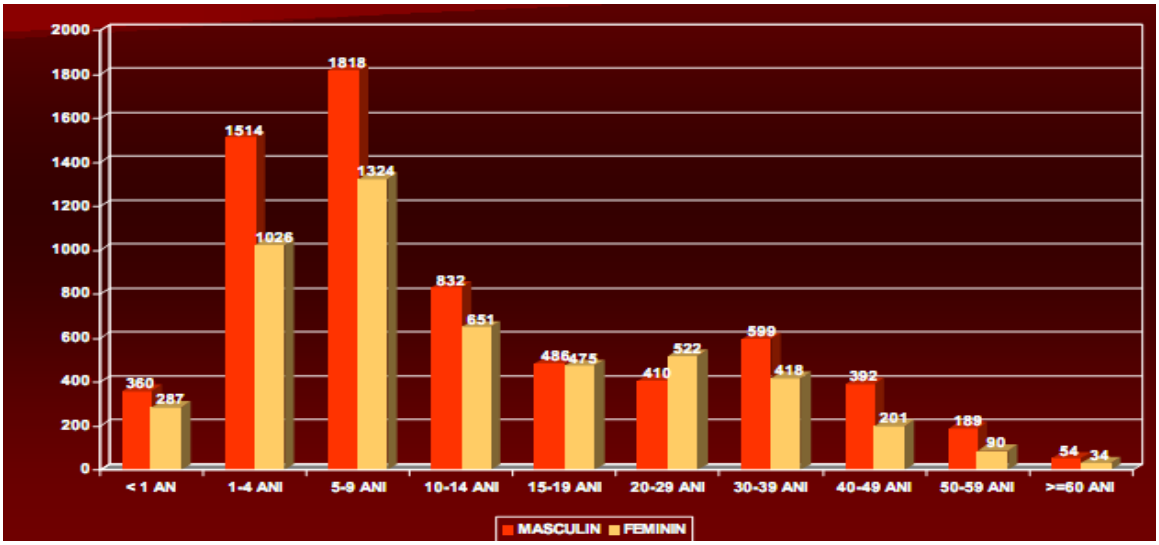
AIDS incidence in Romania, 1985-2009 (per 100.000), children (green) and adults (yellow)



AIDS prevalence in Romania, 1985-2009 (per 100.000), children (red) and adults (yellow)



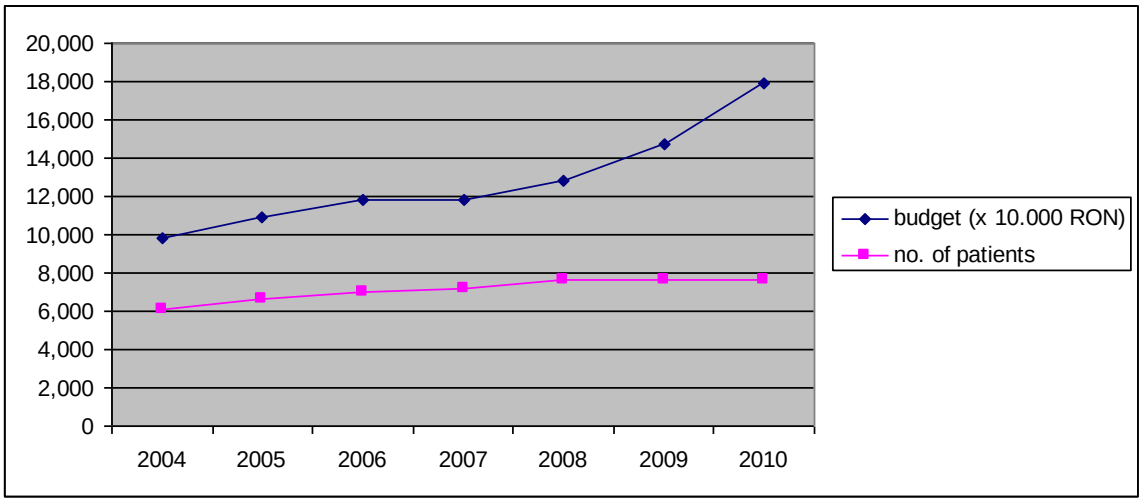
AIDS - age and sex distribution (at the time of diagnosis), 1985-2009



TOTAL NO. OF PATIENTS WITH HIV/AIDS (cumulative **1985-2010**):	**16.433**
- Children (0-14 years at the date of diagnosis)	**9.825**
- Adults (>14 years at the date of diagnosis)	**6.608**
Deaths due to AIDS	**5.626**
Patients lost from evidence	**562**

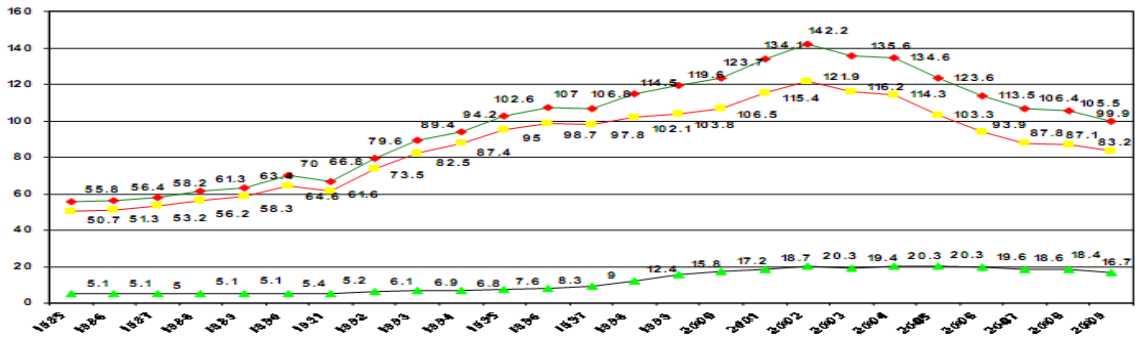
Total no. of patients with AIDS (cumulative 1985-2009)	**11.885**
- Children (0-14 years at the date of diagnosis)	**7.866**
- Adults (>14 years at the date of diagnosis)	**4.019**
Total no. of patients with HIV (cumulative 1985-2009)	**4.548**
- Children (0-14 years at the date of diagnosis)	**1.958**
- Adults (>14 years at the date of diagnosis)	**2.589**
New cases in 2009	**428**
Deaths in 2009	**113**

TOTAL NO. OF PATIENTS WITH HIV/AIDS, among which:	**8.734**	
- Children (0-14 years – current age)	**236**	**12,5%**
- Adults (>14 years – current age)	**8.498**	**87,5%**
TOTAL NO. OF PATIENTS WITH ANTIRETROVIRAL TREATMENT, among which:	**7.306**	
- Children (0-14 years – current age)	**203**	
- Adults (>14 years – current age)	**7.103**	

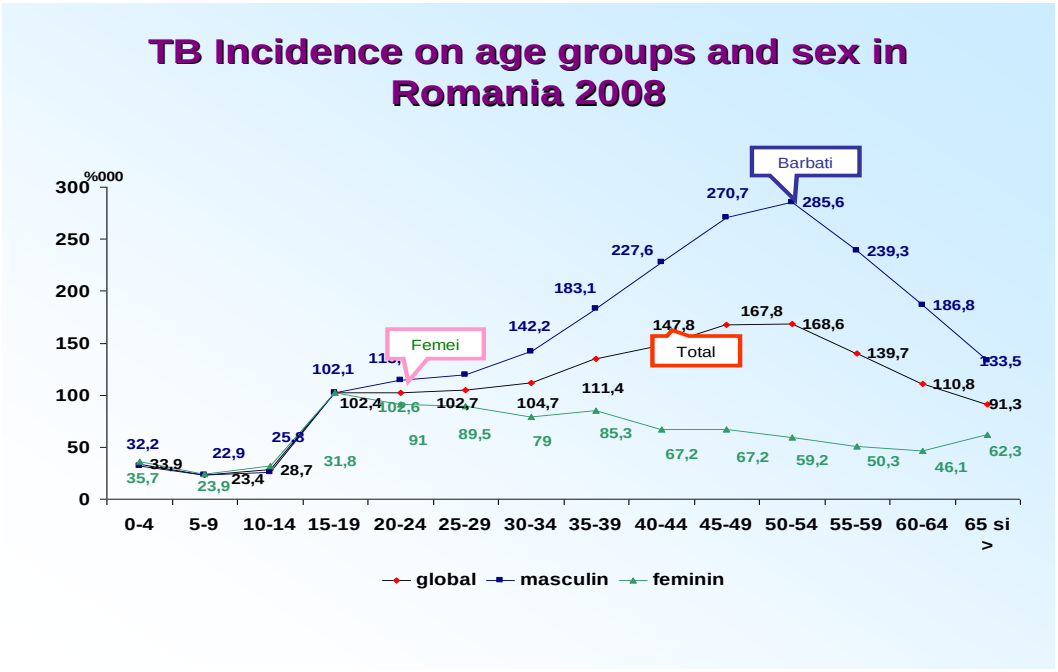


	2004	2005	2006	2007	2008	2009	2010
Total budget for AIDS (x1000 RON), of which:	**102,709**	**110,484**	**120,301**	**130,047**	**132,000**	**150,146**	**148,000**
- NHIH	98,198	108,704	118,421	118,000	128,134	147,523	148,000
- MoH	4,511	1,780	1,880	12,047	3,866	2,623	
No. of patients, of which:	159,168	114,040	162,223	179,600	185,111	311,387	0
- prevention (tests)	159,168	114,040	162,223	172,000	178,000	302,000	
- treatment	6,125	6,641	6,963	7,170	7,628	7,656	

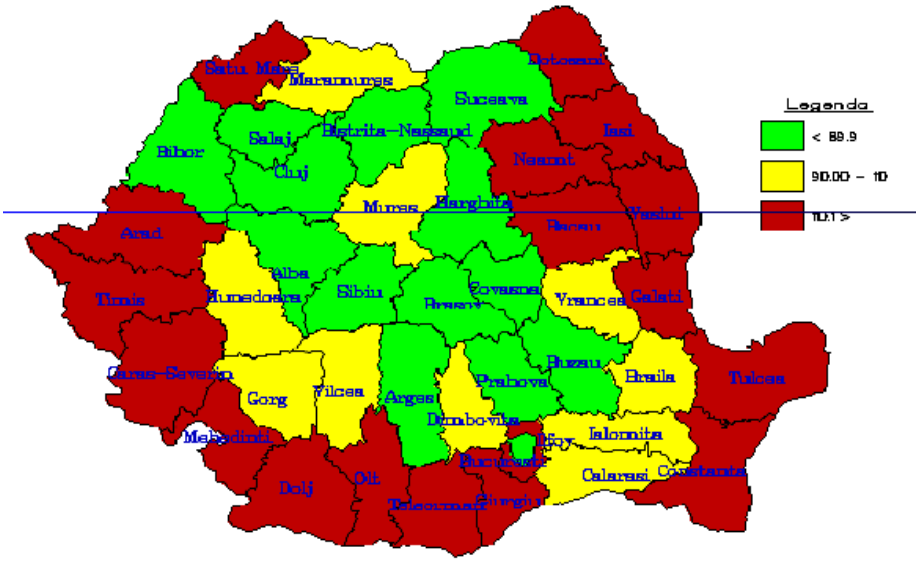
TB Incidence in Romania, 1985-2009 (new cases & relapses)



Source: www.tbnews.ro

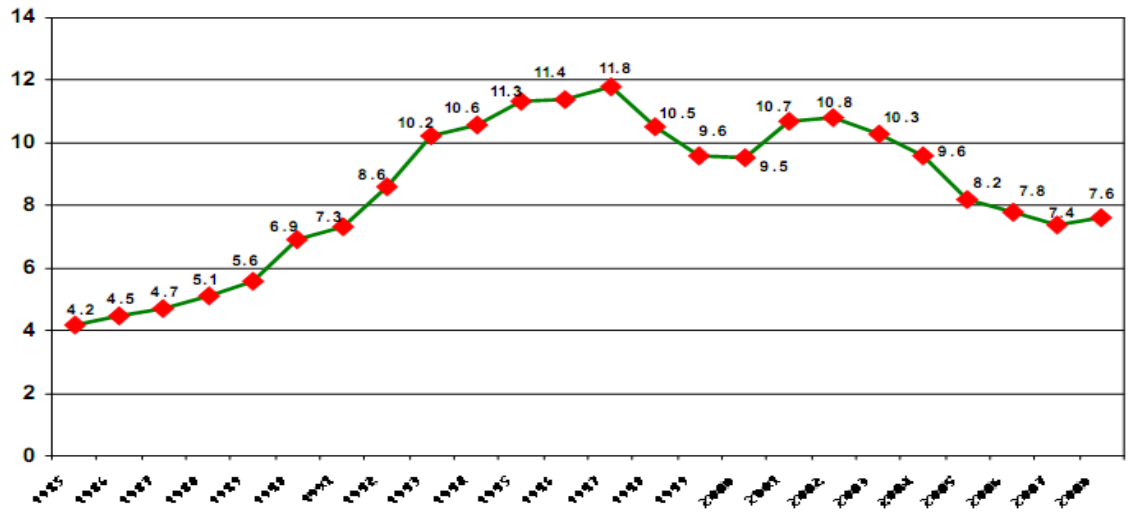


The geographical distribution of TB, 2009



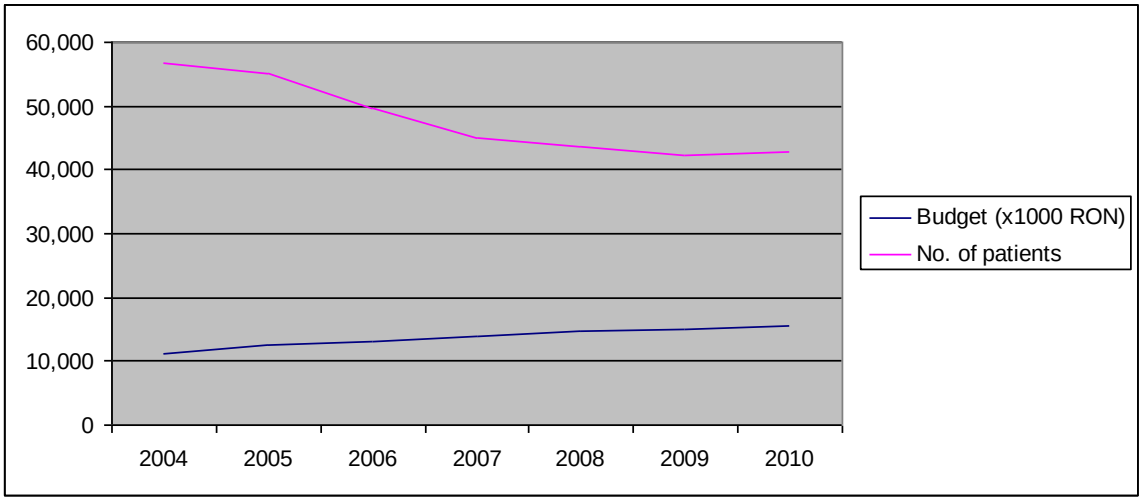
Source: www.tbnews.ro

TB mortality in Romania, 1985-2009



	2004	2005	2006	2007	2008	2009	2010
TB Total budget (x1000 RON), of which:	**16,259**	**15,632**	**17,484**	**18,804**	**17,640**	**20,596**	**15,758**
- NHIH	11,101	12,552	13,184	13,784	14,720	14,935	15,758

- MoH	5,158	3,080	4,300	5,020	2,920	5,661	
No. of patients, of which:	348,224	328,440	370,340	379,690	426,000	367,330	0
- prevention (tests)	291,630	273,320	320,750	330,000	380,000	325,000	
- treatment	56,594	55,120	49,590	45,029	43,631	42,330	



2009 World Bank household budget survey: Access to medical services in Romania improved in recent years, but remains uneven. Thus, if in 1996 about 40% of the population did not request medical care when needed, the percentage fell under 30% in 2008, mainly due to a significant improvement in emergency services. Almost 60% of people admitted in hospital said they made informal payments in 2008, compared to about 30% in 2001. The survey also shows that 63% of the households in the poorest quintile pay out of pocket, compared with 88% of the richest.

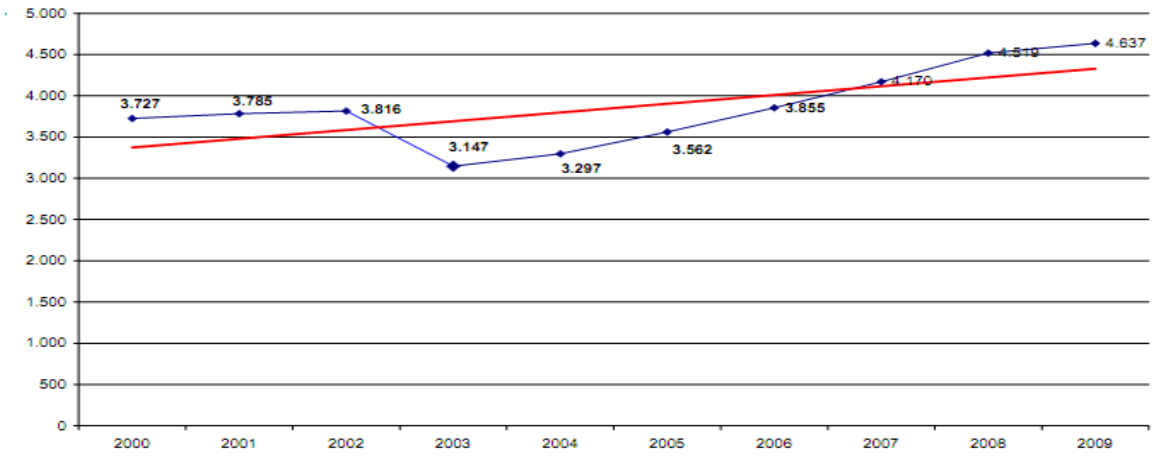
Health budget allocation, 2009

Number of specialized doctors in ambulatory care in contract with NHIH, 2007 and 2009

	Specialty	Doctors 2007	Doctors 2009	Difference
1	Allergology	63	72	14%
2	Cardiology	352	536	52%
3	General surgery - adults	690	1,062	54%
4	Children surgery	84	105	25%
5	Plastic surgery	61	96	57%
6	Dermatology	436	435	0%
7	Diabetes	248	294	19%
8	Endocrinology	210	242	15%
9	Gastroenterology	104	163	57%
10	Genetics	6	8	33%
11	Hematology	39	53	36%
12	Neurology	481	622	29%
13	Pediatric Neurology	67	52	-22%
14	Nephrology	60	84	40%
15	Oncology	184	220	20%
16	Obstetrics & gynecology	714	1,074	50%
17	Ophthalmology	608	634	4%

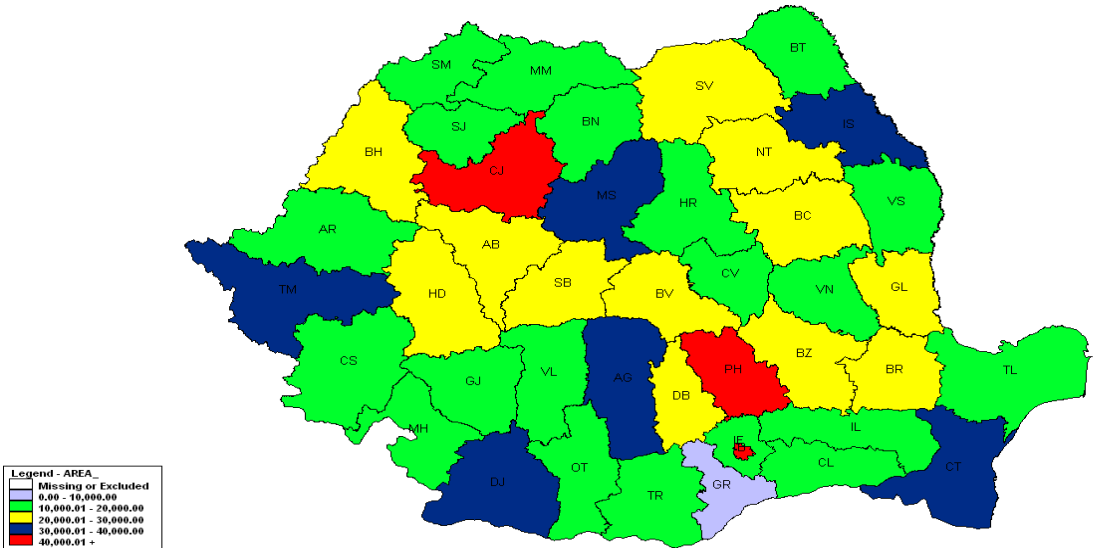
18	ENT	555	641	15%
19	Orthopedics	297	403	36%
20	Pediatric orthopedics	10	21	110%
21	Pneumology	159	287	81%
22	Psychiatry	532	675	27%
23	Pediatric psychiatry	53	64	21%
24	Radiotherapy	32	42	31%
25	Rheumatology	95	131	38%
26	Urology	162	229	41%
27	Internal Medicine	1,166	1,397	20%
28	Geriatrics	32	41	28%
29	Pediatrics	725	804	11%
30	Family Planning	13	14	8%
31	Acupuncture	46	40	-13%
34	Infectious diseases	28	15	-46%
36	Neurosurgery	17	22	29%
39	Maxilo-facial surgery	4	7	75%
40	Thoracic surgery	5	6	20%
41	Vascular surgery	2	4	100%
	TOTAL	8,347	10,606	27%

No. of drug providers in contract with NHIH, 2004-2009

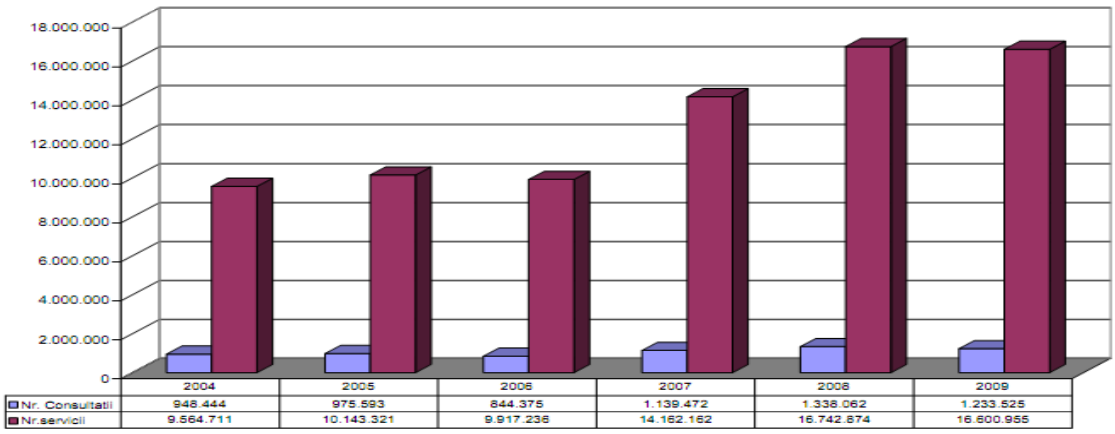


Source: NHIH Activity Report 2009

Pharmaceutical consumption

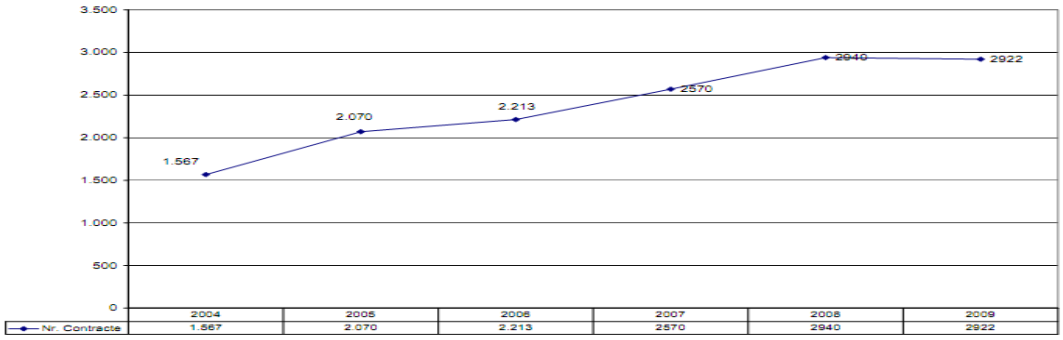


No. of services for rehabilitation in ambulatory care, paid by NHIH, 2004-2009



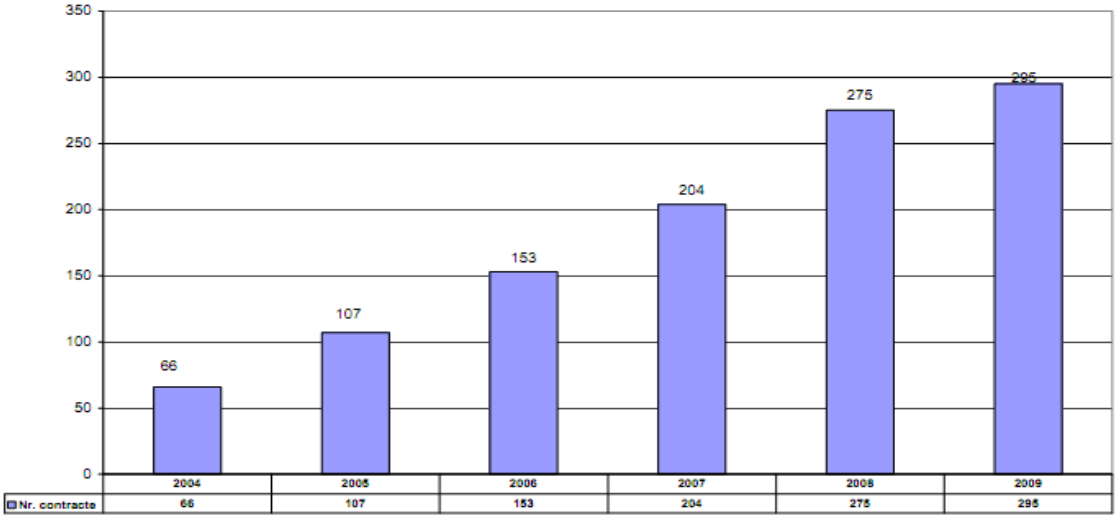
Source: NHIH Activity Report 2009

No. of contracts with providers of medical devices made by NHIH, 2004-2009



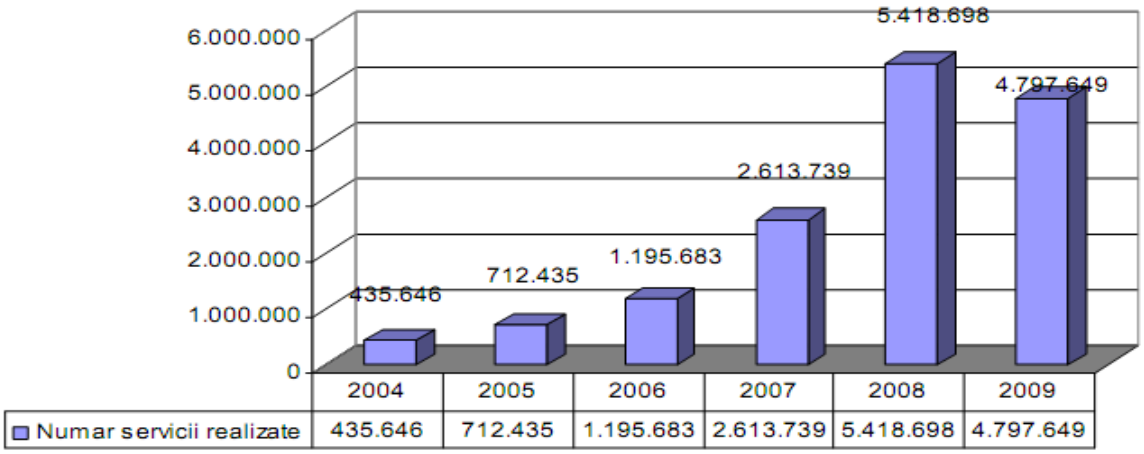
Source: NHIH Activity Report 2009

No. of contracts for home care made by NHIH, 2004-2009



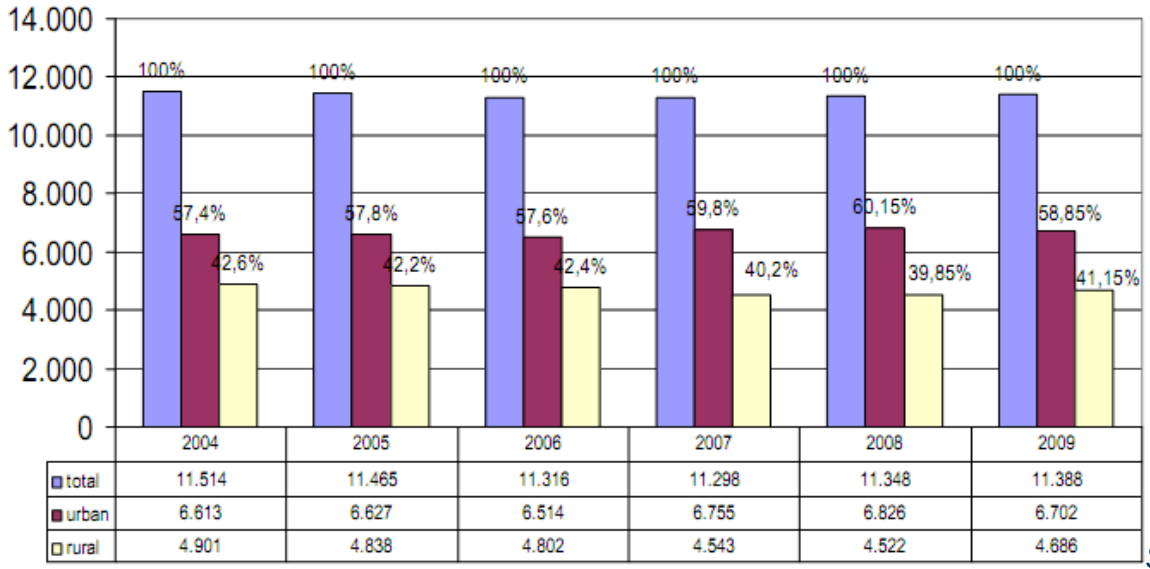
Source: NHIH Activity Report 2009

No. of home care services paid by the NHIH, 2004-2009



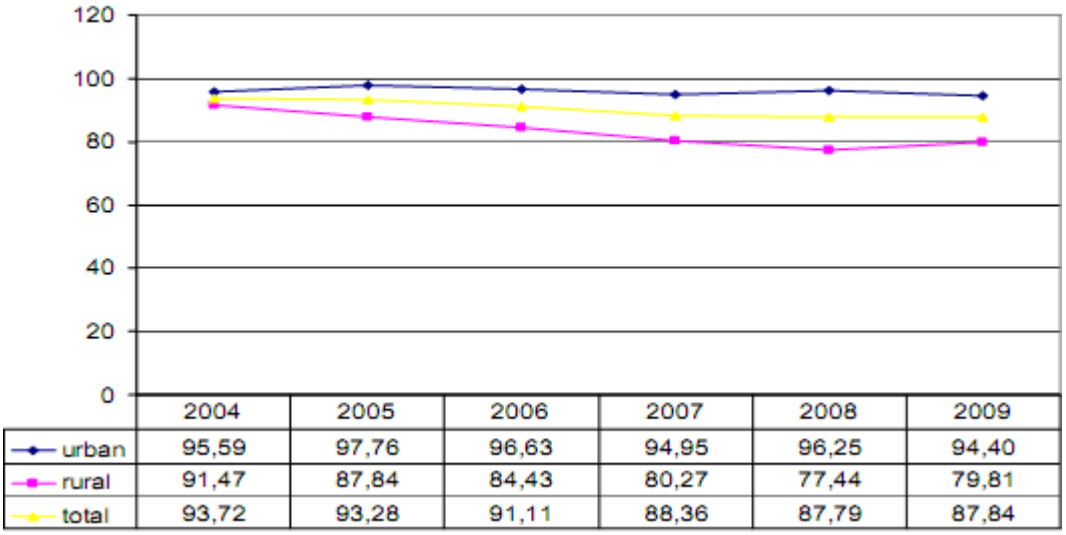
Source: NHIH Activity Report 2009

No. of family physicians in contract with NHIH, 2004-2009



Source: NHIH Activity Report 2009

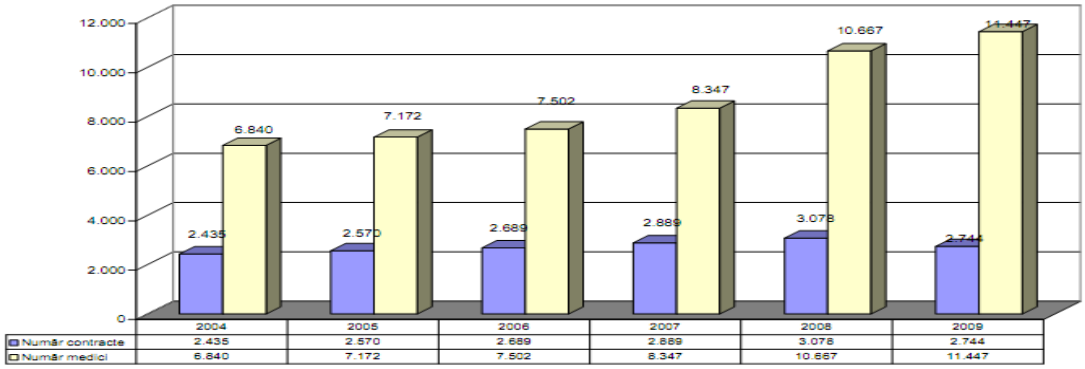
Percentage of population registered with family physicians, 2004-2009



	2004	2005	2006	2007	2008	2009
urban	95,59	97,76	96,63	94,95	96,25	94,40
rural	91,47	87,84	84,43	80,27	77,44	79,81
total	93,72	93,28	91,11	88,36	87,79	87,84

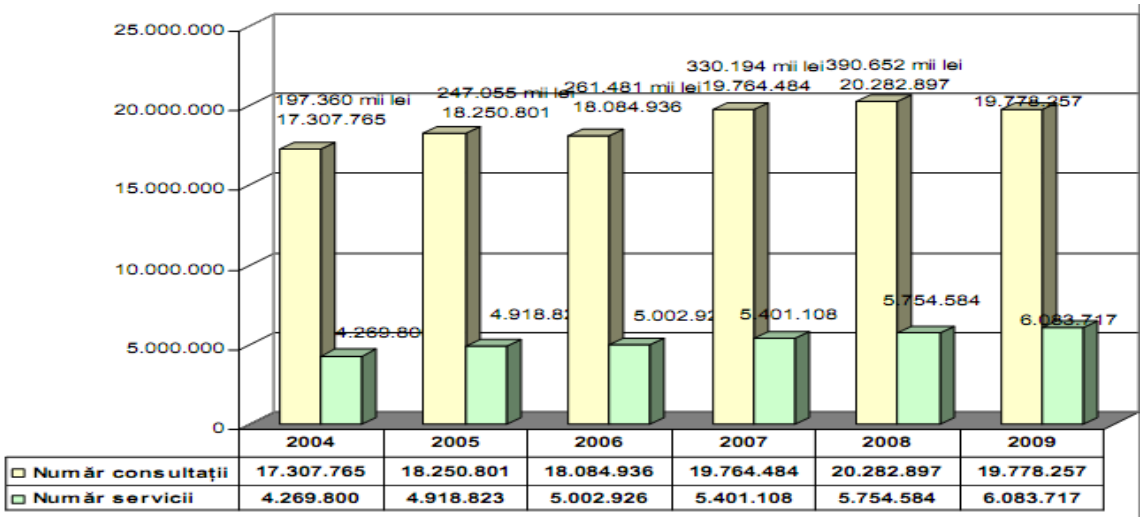
Source: NHIH Activity Report 2009

No. of contracts and specialized doctors in ambulatory care in contract with NHIH, 2004-2009



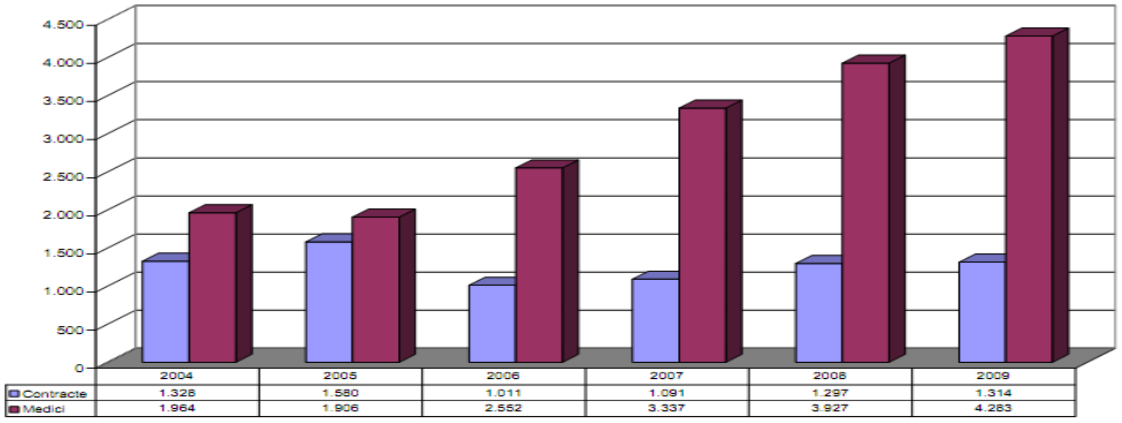
Source: NHIH Activity Report 2009

No. of specialist visits and medical services in ambulatory care paid by the NHIH, 2004-2009



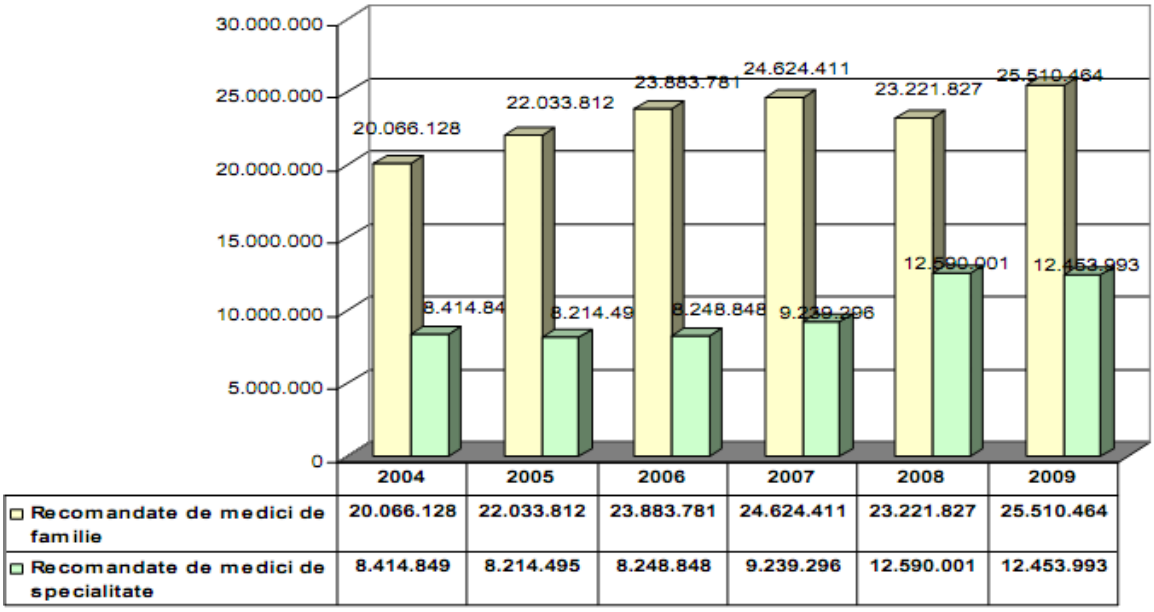
Source: NHIH Activity Report 2009

Contracts for lab & radiology and doctors in ambulatory care paid by NHIH, 2004-2009



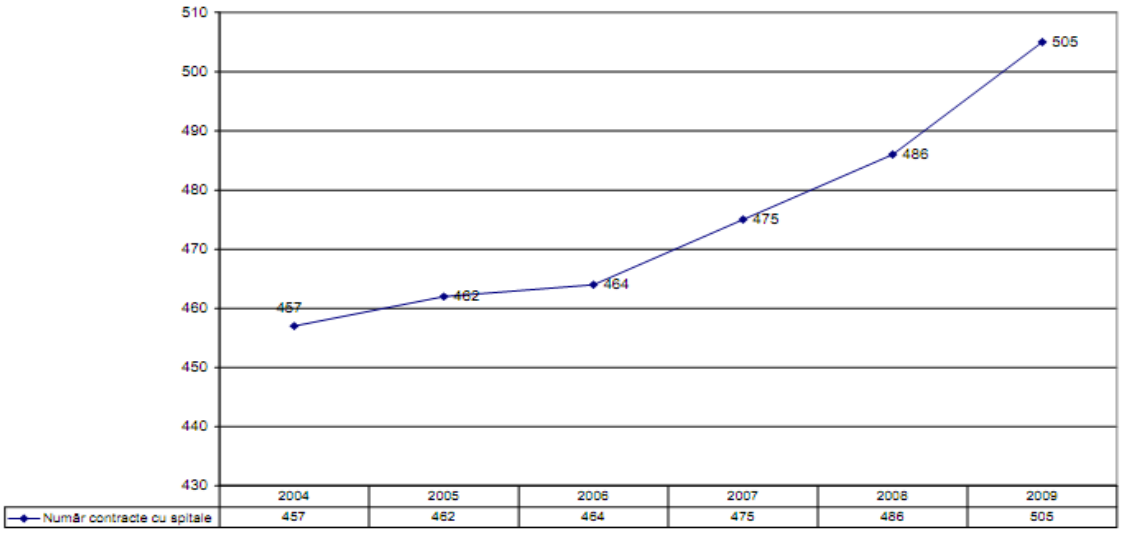
Source: NHIH Activity Report 2009

No. of lab & radiology tests paid by the NHIH, 2004-2009



Source: NHIH Activity Report 2009

No. of contracts with hospitals made by NHIH, 2004-2009



Source: NHIH Activity Report 2009

Number of transplants	2006	2007	2008	2009
- heart	1	4	6	8

- bone marrow (self-transplant)	28	60	91	79
- bone marrow (from a donor)	0	0	24	24
- kidney	157	220	227	207
- liver	17	29	43	28
- pancreas	0	2	0	36

B. PROGRAMS FINANCED ONLY BY THE HEALTH INSURANC HOUSE

I. Program for renal dialysis

The program provides funds for drugs and medical materials for patients with renal failure (about 13.000 patients/year).

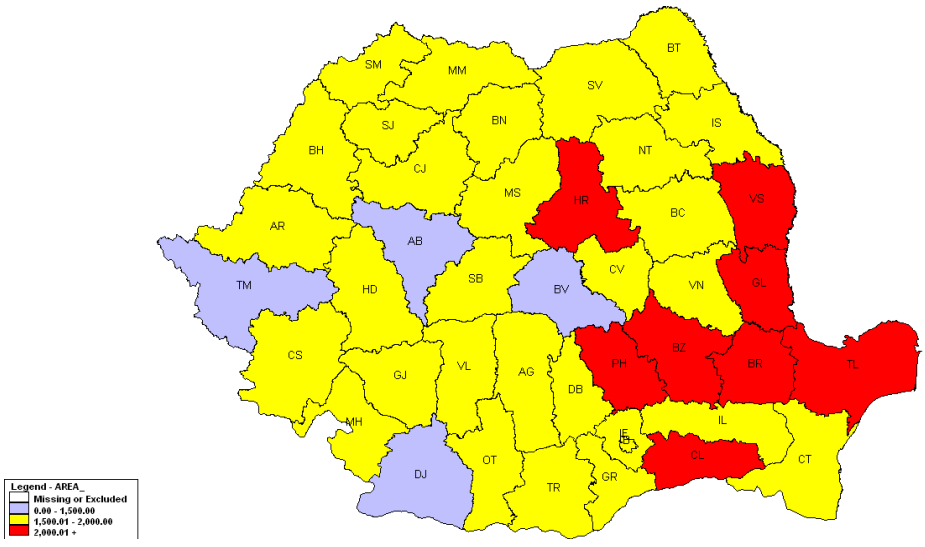
Budget: 491.286.000 RON– from NHIH

II. Program for orthopedic surgery

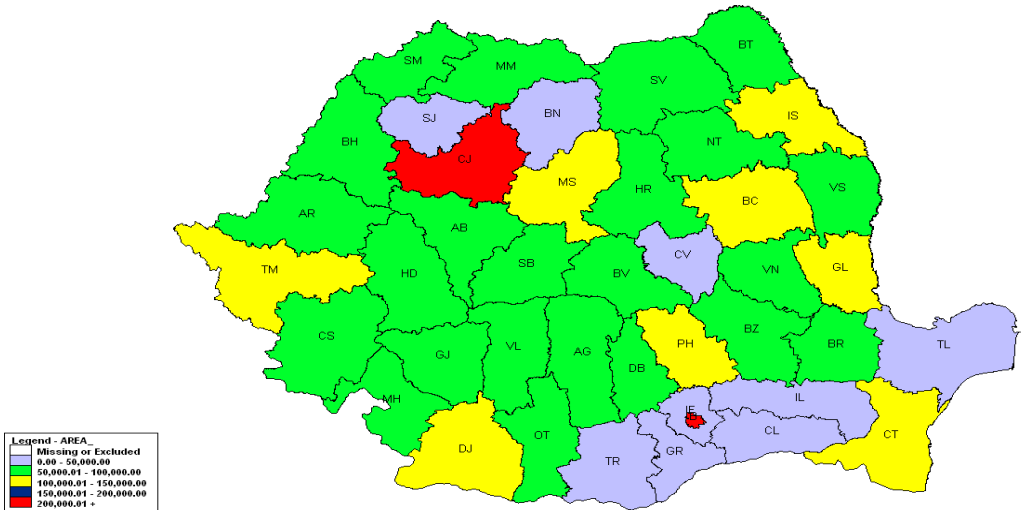
It provides funds for acquisition of medical prosthesis for patients with orthopedic diseases (about 11.000 beneficiaries/year).

Budget: 30.866.000 RON– from NHIH

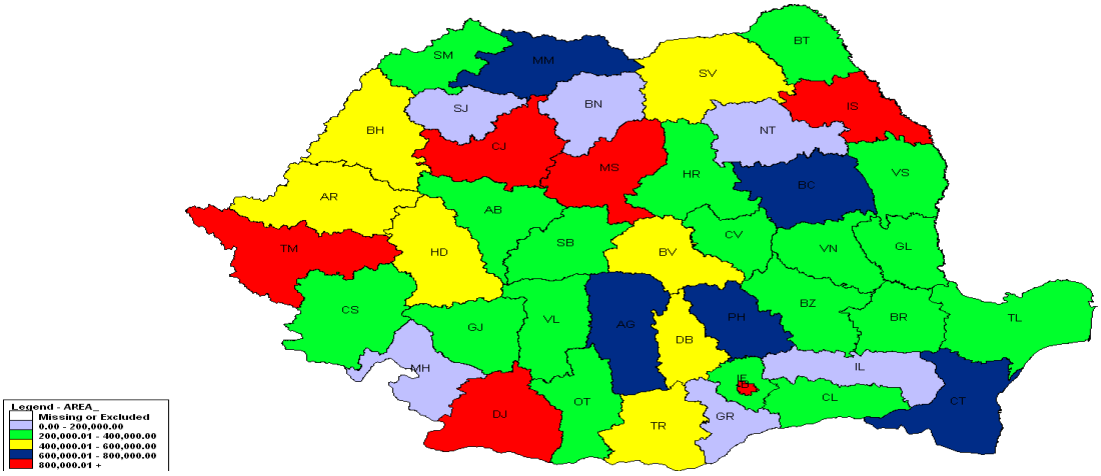
Family physicians availability



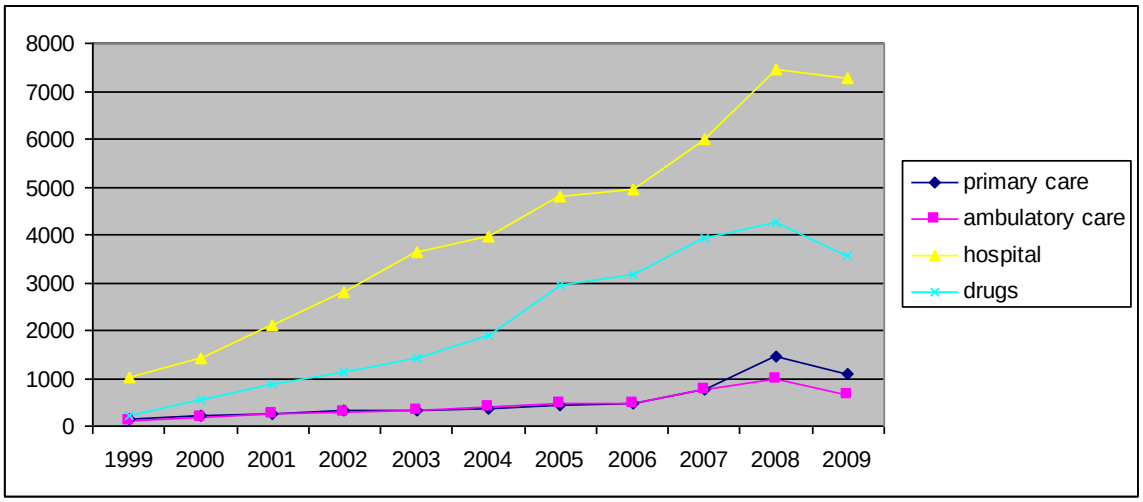
Concentration of university centers, institutes and tertiary care



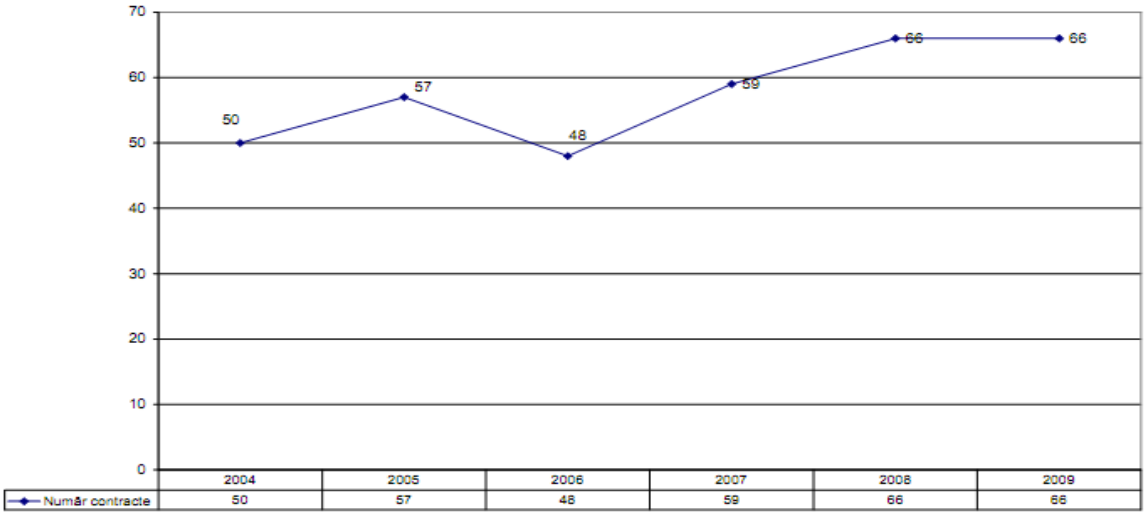
Geographical distribution of ambulatory care services – 2007



Health Insurance House allocation on the main health system components, 1999-2009

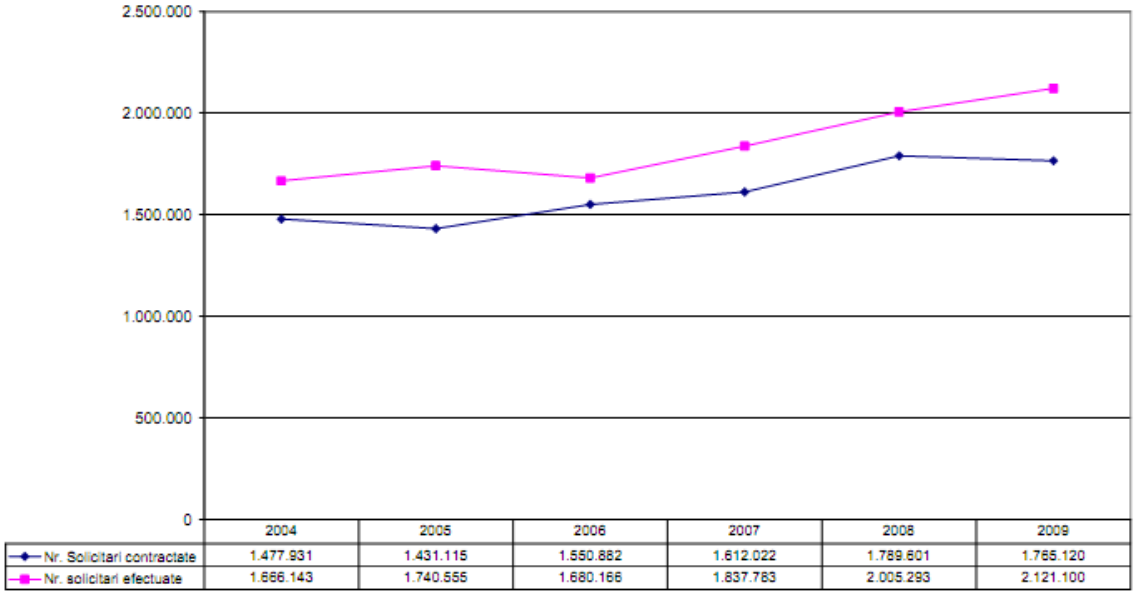


No. of contracts concluded by NHIH with emergency care providers, 2004-2009



Source: NHIH Activity Report 2009

No. of emergency cases contracted and effectively paid by the NHIH, 2004-2009

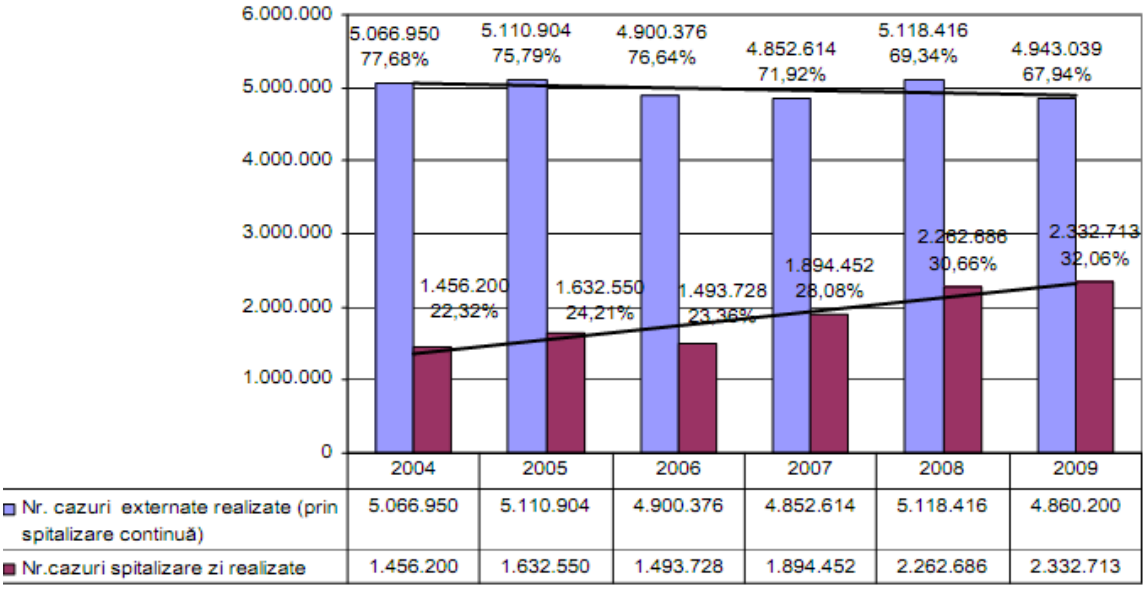


	2004	2005	2006	2007	2008	2009
Nr. Solicitari contractate	1.477.931	1.431.115	1.550.882	1.612.022	1.789.601	1.765.120
Nr. solicitari efectuate	1.666.143	1.740.555	1.680.166	1.837.783	2.005.293	2.121.100

Source: NHIH Activity Report 2009

Emphasize the problems with emergency care

No. of hospital patients (on day care and admitted) paid by the NHIH, 2004-2009



	2004	2005	2006	2007	2008	2009
Nr. cazuri externate realizate (prin spitalizare continuă)	5.066.950	5.110.904	4.900.376	4.852.614	5.118.416	4.860.200
Nr.cazuri spitalizare zi realizate	1.456.200	1.632.550	1.493.728	1.894.452	2.262.686	2.332.713

Source: NHIH Activity Report 2009

BIBLIOGRAPHY

1. www.ms.ro - Ministry of health - Annual reports on national public health programs
2. www.NHIH.ro – National Health Insurance House – Annual activity reports 2007-2009
3. Mardarescu M. - Epidemiology of HIV infection in Romania, “Romania where?”, The Fifth National Congress regarding HIV Infection
4. www.tbnews.ro -
5. www.fondulglobal.ro -
6. eu-cancer.iarc.fr - European Cancer Observatory
7. World Health Organization – World Health Statistics 2010
8. www.worldbank.org – Health indicators
9. www.sar.org – Romanian Academic Society – Policy brief no. 52 – The Health System, work in progress – Dec. 2010