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HII EXPENDITURES FOR PHC BENEFIT PACKAGE

AN ANALYSIS OF FIVE ALBANIAN PREFECTURES

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ABBREVIATIONS

CPG	Clinical Practice Guidelines
GP	General Practitioner
HII	Health Insurance Institute
HC	Health Center
ICD-9	International Classification of Diseases-9
MoH	Ministry of Health
MBP	Minimum Benefit Package
MoLG&D	Ministry of Local Government and Decentralization
MoF	Ministry of Finance
O&M	Operations and Maintenance
PHC	Primary Health Care
USAID	United States Agency for International Development
WB	World Bank

EXECUTIVE SUMMARY

Ever since it was created in 1995, and until this year, the Health Insurance Institute (HII) has had authority and responsibility for deploying and financing only part of the resources needed to deliver primary health care services throughout Albania. The original statute authorized it to contract with General Practitioners in order to make them evenly distributed throughout the country, and to reimburse most of the costs of prescription drugs that such GPs would prescribe to those beneficiaries entitled to HII benefits. Because the Ministry of Health (MoH) and the local governments were also given some responsibilities with regard to staffing and managing the Health Centers and Health Posts, accountability for results became fragmented. According to a Council of Ministers decision of December, 2006, however, the HII was given authorization to launch a comprehensive reform of the ways in which PHC services are to be financed and managed in Albania. As of January 1, 2007, the HII became the sole source of all funding of Health Centers, began to implement new ways of financing them through performance-based payments, and gave a greater degree of autonomy to each Health Center to govern its own operations and to be accountable for its staff and finances.

In the contracts that the HII was authorized to sign with each of 405 Health Centers, each Health Center was required to become capable of providing a Minimum Benefits Package (MBP). A list of conditions to be treated and services to be provided at each Health Center was developed by a Committee of the MoH, in order that the Health Center (and patients) would know which conditions were to be diagnosed and treated at each Health Center, and which services were to be provided. In order to assist the HII and the Health Centers to achieve the capacity to respond to patients' needs according to the MBP, the World Bank, through its Health System Modernization Project, will purchase many of the supplies and equipment that will be needed to deliver the MBP. However, during the transition to executing these new responsibilities, both the HII and the Health Centers will need to collect and analyze a broad range of cost and expenditure data so that they will be better prepared to know their budgetary needs as may be indicated by the MBP requirements and as may be required of them by the demands made on them by patients. To date, such cost and expenditure data are not available. This paper is intended to provide detailed data and analyses of current expenditures on the conditions listed as included in the MBP. The findings, conclusions, and recommendations will help the HII to know better how to allocate resources and negotiate budgets when it contracts with Health Centers in the future.

Thus, the objectives of this paper are: (1) to estimate the total expenditures by the HII on those conditions listed in the MBP, including prescription drugs for 2007, and (2) to relate these total expenditures to significant, discrete sources of care – Health Centers, doctors, and nurses – and, to the extent possible, to discrete units of services (visits and prescriptions). The scope of the study will necessarily be limited to the actual expenditures by the HII Health Centers on the conditions listed, to the extent to which the Health Centers have been able to treat them. Because most Health Centers are still operating at a capacity below that needed to fully fund the delivery of MBP services, these initial expenditure estimates will serve as a baseline or benchmark, against which future budgets and expenditures and service delivery can be judged. After describing the approach and methodology of this study, we will summarize the main results below.

The expenditure data analyzed came from five of the twelve prefectures of Albania: Berat, Diber, Korce, Lezhe, and Shkoder. These were the first prefectures to begin to fill out encounter forms for every visit, starting on July 1, 2006, in every Health Center and affiliated facility, no matter what the nature of the visit (including home visits). Although data on HII expenditures on operations (staff, benefits, and maintenance costs) and on prescription drug reimbursements were thus available for only part of 2007 (through July, 2007), this paper makes estimates for all of 2007, in order to establish a calendar year estimate to use as a benchmark or baseline for future years. Although indirect costs (administration, etc.) should be included in the recurrent cost estimation, these were excluded, as were costs of capital and equipment. Only direct costs of operating the Health Centers and of subsidizing prescription drugs were included in the 2007 estimates. Costs of prescription drugs by MBP condition were collected from HII's management information system for the same period covered by the collection of direct operating costs.

There are 151 Health Centers in the five prefectures, with one out of six (26) located in urban areas and more than three out of four (115) located in rural areas. The rest (10) were classified as in “mixed urban/rural areas. Out of the 1.3 million people registered at these 151 Health Centers, almost 500,000 lived in urban areas and about 725,000 lived in rural areas. The remainder (almost 100,000) lived in mixed areas. Each urban Health Center covered about 19,000 persons on average, each mixed Health Center 10,000, and each rural Health Center over 6,000 persons. General Practitioners (GPs) are deployed to urban areas in numbers sufficient to cover the more densely population areas (40% of them), while nurses were deployed disproportionately in rural areas (65% of them). So while there was a relatively even distribution of persons per GP (about 2,400), the distribution of persons per nurse (about 500) varies from 700 in urban areas to 400 in rural areas – a disproportionate share serving in rural areas.

The utilization of services reflected this differing distribution of GPs and nurses. Of some 3.9 million total visits during the year (about 3 visits per person per year), about one-third of them were seen in urban Health Centers and less than one-fourth of them were seen by GPs. More than half of all GP visits, however, were seen in urban Health Centers, and virtually all of them were associated with a prescription. GPs saw an average of 6 patients per day, but the average was almost 9 in urban Health Centers, and just over 4 in all other Health Centers (mixed and rural). Nurses saw an average of over 3 patients per day, but those in rural areas saw slightly more patients per day than nurses in urban areas. There was a considerable variation in the average number of visits per GP and per nurse by the type of Health Center and by prefecture – which probably reflected differing patterns of disease, differing patient behaviors in seeking treatment (bypassing rates), and differing patterns of treatment by facility and by GP or nurse.

As a consequence of the 1.0 million visits to GPs in the five prefectures (estimated for 2007), there were about 862,000 prescriptions written. The number of prescriptions written per GP per condition varied greatly across Health Centers by type and by prefecture. For example, by far the most prescriptions were written for hypertension (39%, or 335,000) and respiratory infections (192,000, or 22%). But the number of prescriptions written per GP varied greatly from about 900 per GP per prescription in Diber to over 2,300 per GP in Korce, and varied within prefectures by type of Health Center (urban, mixed, or rural) The amount that HII paid per prescription per condition also varied widely by type of Health Center. In Korce, GPs in rural areas wrote prescriptions for hypertension costing HII Leke 750 per prescription in rural Health Centers and Leke 1,400 per prescription in urban Health Centers.

When the costs of prescriptions were added to the recurrent costs of operating Health Centers, there was also substantial variation across types of Health Centers and by prefecture. While the prescription costs per GP visit by type of Health Center and prefecture were similar in averages by type of Health Center (between Leke 800 and Leke 900 per visit), the variation by type of Health Center by prefecture ranged widely, from almost Leke 1,300 per GP visit in Diber (rising to almost Leke 1,700 in rural Health Centers) to only Leke 600 per GP visit in Korce and Leke 700 per GP visit in Berat. While the prescription drug cost per GP visit were similar across types of Health Centers and prefectures, the recurrent costs of providing those visits showed higher averages in rural areas than in urban areas. While the overall average recurrent cost per GP visit was about Leke 600 overall, it varied from Leke 330 per GP visit in urban Health Centers to Leke 940 per GP visit in rural areas. When added together, of course, the differences were somewhat moderated, but rural areas still showed much higher total costs per GP visit, the overall average of Leke 1,750 masking a range from Leke 3,650 per GP visit in Diber to just under Leke 1,100 per GP visit in Korce.

If one isolates recurrent costs attributable to nurses (salaries and benefits only) and relates them to the services they render, their superior numbers and visits in rural areas are reflected in a lower average total cost per visit of about Leke 300 as compared to a higher average cost per visit in urban areas of Leke 360 per nurse visit. For nurses, the variations in average costs across Health Center types and prefectures were not that significant.

INTRODUCTION

An integral part of the contract between each Health Center and the HII is a list of conditions and treatments that comprise the Minimum Benefits Package (MBP) that each Health Center is required to service and/or provide. The MBP list was originally mandated by the Council of Ministers decision of December, 2006, that authorized this reform, but has been refined by a committee convened for such a purpose by the Ministry of Health. Until this reform, the HII's role in the delivery of these MBP services was to contract with, and pay the salaries of General Practitioners (GPs) at the Health Centers, and to subsidize the purchase (by HII beneficiaries) of the prescription drugs prescribed by the GPs. Now that the HII has become the sole source of financing, and accountable for financial management of the Health Centers (and their staffs and operations), the HII needs to begin to gather information of the cost requirements implied by the MBP that the Health Centers are required to provide.

Any analysis of the probable cost of providing the MBP to HII beneficiaries will require a longterm plan of data development and analysis that will only begin in this first year of reform. A number of different variables would affect the costs, and would have to be taken into account, such as the patterns of disease incidence in various communities around the Health Centers, patients' inclinations to seek care at the Health Centers (and not at polyclinics or hospitals), and the abilities and capacities of the GPs and staffs of the Health Centers to treat the MBP according to the symptoms presented by patients.

At the moment, all of these variables are beginning to change, perhaps radically, as the governance and financing arrangements in the reform are beginning to change. Of particular note are the supplies and equipment that are to be donated next year by the World Bank Project – which can be expected to expand the capacities of the Health Centers to treat certain conditions. Also, the technical skills of the GPs as Family Physicians are expected to be upgraded over the next year or two in order to improve the quality of care available from the Health Centers. Staffing patterns may also change as Health Centers seek to rationalize their use of resources and to be more efficient in the delivery of care. Ultimately, the costs of replacing consumable supplies (about to be donated, but not now available from budget spending) and or repairing durable medical equipment (also about to be donated), will have to be internalized into the Health Centers' cost and budget structures. The amounts needed are unknown at this time, but will be an integral part of the expected costs of the MBP.

Furthermore, as GPs (and the Health Center staffs) improve the quality of their care, the bypassing phenomenon might change, and one might expect utilization of their services to rise in some Health Centers, particularly those located in urban areas. Population declines in more rural areas, as well as changes in preferences of patients, might, on the other hand, cause utilization of more remote Health Centers to decline. The degree of efficiency in the delivery of MBP services might also affect the average and marginal costs of providing them. Therefore, all of these factors imply that future costs of providing the MBP services cannot be accurately estimated now. Moreover, as Health Centers gather more up-to-date data on the populations of surrounding communities and as they complete registration of local residents by Health Center, the expected number of visits will also likely change, and should be taken into account when developing budgets.

However, a beginning point in the process of estimating MBP costs, as the capabilities of Health Centers improve, would be to estimate the current expenditures of the HII, to the extent possible on MBP conditions, including both the running costs of the Health Centers and the reimbursed part of the drugs prescribed by the HC GPs. It is the estimation of such expenditures for 2007, subject to several qualifications, that has been performed. The findings are presented and discussed in detail in Section 6.

BACKGROUND

Prior to the downfall of communism in 1991, Albania's health system, though highly centralized in its organization and management, relied heavily on a foundation of primary health care services provided at the local level through a large network of health centers and health posts. Staffed largely by midwives who provided antenatal care and immunizations, these facilities provided referrals to higher-level facilities when and as needed, but were heavily used by the local population for their

basic healthcare needs. Though budgeting and staffing were controlled from the central Ministry of Health, the direct administration of the wider network of hospitals, polyclinics, and health centers, was the responsibility of some 36 district health offices.

But a severe economic downturn during the transition to democracy (1990 – 1992) led to a decline in government revenues, and government spending on healthcare fell by about one-half. With salaries of healthcare workers going unpaid and with drugs becoming virtually unavailable outside the urban areas, the availability of almost any healthcare in rural areas declined precipitously. In response to this crisis, the government passed a law that created the Health Insurance Institute (HII),¹ which was tasked to manage a modest health insurance fund to be financed by earmarked payroll contributions. It covered only (partial) reimbursement of expenditures on essential drugs and the remuneration of General Practitioners (GPs), giving supplemental payments (incentives) for GPs agreeing to serve in rural or remote areas. Legislation also made the HII an autonomous public body, governed by a Board (chaired by the Minister of Health) and an 11-member Administrative Council. The HII benefits took effect on March 1, 1995, when the payroll contributions also took effect.

At the same time during the 1990s, moreover, there were other changes to health system organization and financing as a result of a decision to decentralize the Government, authorized by a 1992 law,² which led to the creation of the Ministry of Local Government and Decentralization (MoLG&D) in 1998, and the establishment of 12 prefectures (each comprised of about three districts). As a result, in 1993, some administrative authority was shifted from central government to these prefectures, and to local governments (municipalities and communes). The 1992 decentralization law also regulated the election and powers of local authorities, and shifted some responsibility for PHC to rural areas. The local government authorities of all 315 rural communes now own their PHC facilities and are thus partly responsible for PHC. The Ministry of Finance shifted the MoH line item for operations and maintenance (O&M) of PHCs (line item 602 for PHC facilities) to the MoLG&D³ which included those funds in block grants to local governments, which in turn had responsibility to decide how much to allocate for their local PHC center for O&M. Some other items in the PHC budget also were transferred from the MoH to local governments “conditionally” or through “earmarks”, which meant that the amounts were still determined centrally. Thus, while the HII paid GPs and some pediatricians at Health Centers, and covered most of the cost of outpatient drugs for their own beneficiaries, other fiscal, administrative, and management responsibilities were split among the three other agencies: the MoH, the MoLG&D, and local governments.

By the year 2000, then, management and financing of PHC was considerably fragmented, with the MoH maintaining authority to select, deploy, and supervise (but not to pay) GPs (which was done by the HII individual contracts with GPs), to select, deploy, supervise, and pay all nurses, and to manage and finance all hospitals.⁴ GPs’ salaries and most of the cost of outpatient drugs were paid for by the HII, while expenditures on O&M of PHC facilities were determined by local governments (and, thus, the upkeep of the facilities varied from place to place).

Recent reforms, however, have served to reverse this fragmentation. First, in 2003, the MoH regained authority to allocate the budgeted funds for operations and maintenance of all PHC facilities, as these funds were shifted back to the MoH from the MoLG&D. Second, in the same year, the Council of Ministers designated the HII as the future sole source of PHC financing in its authorization of a pilot/demonstration project of this function by the HII in two districts – Berat and Kucova, which was

¹ Authorized by the *Law on Health Insurance in the Republic of Albania*, (No. 7870, dated 13 April 1994) declared with Decree No. 950, dated October 25, 1994, the provisions of which took effect March 1, 1995.

² Law on the Organization and Functioning of Local Government, No. 7572, dated June 10, 1992.

³ Authorized by the *Decree on Local Government Authorities, Functional Tasks, and Funding*, No. 204, dated March 26, 1998, pursuant to Law No. 7572 (cited above).

⁴ Except for the Durres Hospital, which had become a pilot/demonstration project of the HII.

never carried out, and then in one entire prefecture (Berat),⁵ which was also not implemented. Third, in December, 2006, the Council of Ministers decided⁶ to launch, nationwide, the policy of HII being the sole source of PHC finances as of January 1, 2007, and this decision has been implemented – and is one reason for this paper.

This policy includes a relatively greater degree of autonomy to Health Centers over budgetary and staffing decisions, and a new performance-based method of HII's funding part of the costs of Health Centers. The terms of the autonomy and the payment methods are regulated by a contract between each Health Center and the HII. The bulk of the budget (85%) is determined by the total historical budget received by each Health Center. The remainder of payments to Health Centers (paid from the remaining 15% reserved by the HII) is composed of two parts: one is based on level of activity (visits) at the Health Center (10%), and the other will be based on fulfillment of various quality measures (the remaining 5%).

In order to determine the historical budget of each Health Center, the HII added together all the money from the 600 and 601 accounts (salaries and benefits) for all staff [for doctors (from the HII budget) and for nurses and other staff (from the MoH budget)] and all the budgeted funds from the 602 accounts (for operations and maintenance (O&M)) held by the MoH (and distributed by its district office in municipalities) and by the communes (allocated from their own budgets). These consolidations occurred on a regional basis, with the HII Regional Director in charge of making sure that the amounts allocated to each Health Center budget (that became qualified to be in the new program)⁷ were reasonably close to the amounts needed (using 85% of the historical budgets) to fund at least the staff salaries at the same level as in the previous year. (Any remaining budget needs were assumed to have been met by subsequent performance-related payments.)

The factor that caused the most variation among Health Centers was the allocation of the 602 monies in municipalities. It was not possible to determine exactly how much each Health Center had received in the past for O&M purposes (mainly, the utilities) because the bill for all such urban facilities was paid as a lump sum through the District Directorate of Public Health. In any event, before the consolidation and distribution occurred, the funds to be transferred to HII were increased 6% for the GPs salaries, 15% for the nurse/midwife salaries, and 15% for the 602 budget for O&M. The net effect of this was to make it much easier for Health Centers to accept the fact that they would initially get only 85% of the 100% of their "historical budget", because, in effect, at 85% of that increased amount, the budget makes it possible for every HC to afford to set everyone's salary very close to what it had been the previous year, and all staff could see the possibility of making more from the 15% that was to be distributed for better "performance".

⁵ See Decision No. 811, dated 16 December 2005, "On Approval of Project for Financing the Primary Health Care Services in Berat Region, from Health Insurance Institute as a Single Source Financier," referencing Section 36 of Law No. 7870 (creating the Health Insurance Institute), and Sections 24 and 26 of Law No. 8379 (on implementing the State budget).

⁶ See "Decision", No. 857, dated 12 December 2006, "On Health Financing Services in the Primary Health Care from the Mandatory Schema in the Health Care", an "amendment to Law No. 7870, dated 13 April 1994, *Law on Health Insurance in the Republic of Albania*, amended with the proposal for the Ministry of Health, the Council of Ministers". This decision made HII the sole-source financing of PHC. Subsequently, since the beginning of fiscal year on January 2007 the HII became the sole purchaser of PHC services from government health centers on behalf of HII enrollees. Thus, HII pay for GPs salaries, nurses and for other staff, pharmaceuticals, and for expensive examinations at hospitals. Local government pays for investments of health centers i.e. major investment in infrastructures.

⁷ For efficiency purposes, some Health Centers were combined with others, so that the 2006 total of more than 640 Health Centers was reduced to the 2007 total of about 405 Health Centers, of which only 151 Health Centers that are in the five prefectures are subjects of this study.

RATIONALE AND OBJECTIVE OF THIS EXPENDITURE ANALYSIS

This part of the report describes initially the rationale for undertaking this exercise, then outlines the objectives of this study. This section will discuss the scope of the calculations and analysis, and will clarify how current expenditures might be indicative of the actual costs of the MBP – if those services were actually made available to most of the population.

RATIONALE

Recent reform in health financing, including single-source financing, autonomy for Health Centers, performance-based payments, and related budget reforms, have all been predicated on introduction of a Minimum Benefit Package (MBP) of primary health care services, as defined by the MoH. This MBP has created a need to estimate how much money Health Centers now spend for providing current benefits, in order to begin a process of estimating how much it would cost to provide the full range of the MBP in the future and to allocate and plan resources efficiently.

Currently, HII spends its resources on three categories of expenditures: (1) staff salaries and benefits; (2) operation and maintenance of facilities; and (3) subsidies for outpatient prescription drugs for patients eligible for benefits.⁸ (These subsidies account for 50% to 100% of the total cost of a drug, depending upon the drug and the category of beneficiary, with the remainder paid by the beneficiary.) To finance these expenditures, the HII has two major sources of income: (1) income from mandatory wage and income-based contributions from active workers, and (2) transfers to HII from the government's general revenues which is part of the Ministry of Health budget. These sources of income have been roughly equal in magnitude in recent years, and are projected to increase at between 12% and 15% per year over the next three years. They finance HII benefits (consultations with doctors and nurses at no charge at Health Centers, and subsidies of outpatient drug costs) for both active persons (workers making contributions) and non-active persons (certain vulnerable groups declared eligible by the original 1994 Health Insurance Law).

Current expenditures, while they may and do often cover prescription drugs needed for many of the conditions listed in the MBP, may not in fact cover all the services a patient may need for a MBP condition to be treated properly, i.e., according to standard Clinical Practice Guidelines (CPG). (This is true because not all GPs have sufficient training in CPG for the MBP conditions covered, and also because the facilities are not fully equipped with the equipment and supplies to provide complementary resources needed to use the CPG.)

However, current expenditures do provide some data, in order of magnitude, of the minimum amounts required to provide the MBP. Moreover, the process of calculating them, and relating them to the outputs they generate (e.g., in terms of visits, prescriptions, etc.) will enable analysts to identify the degree to which inefficiencies in service production may be wasting some of the resources currently being spent. This kind of analysis is needed for more effective planning in the future. Knowing actual current spending for each condition, and relating that level of spending to the outputs so financed, are stepping stones towards enabling design of a more efficient future allocation of resources.

OBJECTIVES AND SCOPE OF THE ANALYSIS

The objectives of this analysis are:

⁸ Capital expenditures on buildings, furniture, and medical equipment will not be calculated in this analysis, primarily because there will be significant investment in PHC equipment in the coming years, and because the methodology for calculating building costs must include a means for apportioning it among several ownership parties.

- to estimate the total expenditures by HII on those conditions listed in the Minimum Benefits Package (MBP) for Primary Health Care, including required prescription drugs, for 2007;⁹ and
- to relate these total expenditures to significant, discrete sources of care – Health Centers and doctors – and (to the extent possible) to discrete units of service (visits and prescriptions).

Thus this study intends: first, to determine the total and average expenditures used to treat at HCs each condition listed in the MBP; and, second, to determine the relative proportions of categories of activities contributing to total MBP costs, e.g., prescription drug costs versus all other costs.

The scope of this analysis is:

- to show how the expenditures of providing MBP/PHC services vary by key strata of costs such as type of expenditure per condition; and
- to show, for MBP/PHC, how the average expenditures on staff salaries, operations and management, and prescription drugs, vary by type of HC, such as urban, rural or mixed, and by doctor as well as by condition (as listed in the MBP).

As this study determines average but not marginal expenditures on each MBP condition (e.g, total expenditures per visit), it will provide an indication about whether MBP services are being delivered efficiently or not, which Health Centers are the most efficient, and which are the most inefficient. (Determining which are the most significant determinants of the variations in efficiency is beyond the major scope of this analysis.) Regarding this issue, our hypothesis is that most inefficiencies are the result of overstaffing of a facility, and/or of excessive bypassing, and/or of placing a facility in the wrong location (too few residents in the surrounding area). Confirming and rejecting this hypothesis may be suggested by our data, but cannot be done within the scope of this analysis.

In addition, this study is conceived as part of an effort to determine future affordability at least in the sense of what would be required of the government to finance the MBP based on estimated costs likely for future years, based on what they are expected to be for 2007. The findings determine the proportional costs of certain categories of outputs and processes. Also results provide some concrete basis for cross-comparison between expenditures on the MBP at urban, rural, and mixed (urban/rural) types of HCs relative to each-other within the same prefecture. However, note that this study is based on the total of current, estimated (for 2007) direct expenditures for staffing, for operations and maintenance, and for reimbursing medications.

Therefore, data utilized in the study depend largely on budget data for existing treatment patterns for MBP conditions. The basic question that this study responds to is, thus, not what should or would be the MBP costs, but rather what it actually now costs the HII to provide what the HII does provide, as the HII is currently organized and financed. Thus, it is clear that this study is not an attempt to estimate the costs of what the MBP should or would cost if all the requisite resources were available and used appropriately to address all of the conditions presented that are within the MBP list of services.¹⁰ The value of the supplies and equipment to be supplied by the World Bank project will not be included because it is not to be provided to the Health Centers until 2008.

⁹ Complete actual data are available for the most recent twelve-month period, July 1, 2006 through June 30, 2007. But, because there were multiple changes—effective January 1, 2007—in Health Centers (640 consolidating to only 405), staffing shifts, changes in budgeting (by implementation of single-source financing), the change from HII’s contracting with individual physicians to contracting with Health Centers, the advent of performance-based budgeting, and greater autonomy for Health Centers to manage their staffs and budgets themselves, it was decided to estimate the expenditures by HII on all benefits for the first year these changes were in effect, despite the expected shortcomings in our estimates.

¹⁰ If it were possible to know what the demand for the MBP would be based on the estimated incidence and prevalence of the covered conditions at each Health Center, one could possibly determine what supplies, equipment, and trained personnel that would be needed to meet that demand. And, if the estimated cost were realistic, one could identify projected service needs according to Health Centers and the populations they serve, and could provide a basis for identifying potential sources of financing for those services. But, since one cannot know (with any precision whatsoever) the likely incidence of conditions or diseases to be presented at any particular Health Center (nor the subsequent demand, (utilization) for those conditions at any facility in question), any such estimate would be not much more than a guess, and would very likely

METHODOLOGY, DATA, AND ASSUMPTIONS USED IN THE EXPENDITURE ANALYSIS

This section is comprised of four parts. First part describes the overall methodology applied; the second part narrates, in general, data used and major cost drivers; the third part outlines assumptions made for this analysis; and, the fourth part points out limitations of the data and the analysis performed in the Section 3.

METHODOLOGY

Estimation of the MBP costs will be largely based on recently reported (budgeted and expended) costs of services rendered by HII, with appropriate adjustments made. The population for which the expenditures will be estimated is the population (in 2007) included in the catchment areas of the health care facilities funded by the HII (which are the registered populations around each Health Center) – a number which includes both insured and uninsured clients.

Expenditures on operating costs of Health Centers will be added to the prescription expenditures in order to obtain total operating costs related to the MBP. These expenditures will be disaggregated by condition (defined by a group of ICD-9 codes that would be used as diagnoses for that condition¹¹) In addition to these prescription costs specifically related to MBP conditions, a certain proportion of prescription expenditures have been made by the Health Centers on conditions not so listed. These will also be added to the expenditures of the HII, by Health Center, by doctor, but they will not be added to totals or averages per condition.

Expenditures of prescription drugs are a function of many factors: (1) disease incidence; (2) the inclination of the patient to seek diagnosis and treatment from a Health Center first and not a higher level of care; (3) preferences of patients for visiting certain doctors or Health Centers for treating certain conditions; (4) the availability and proximity of the Health Center; and (5) the (effective) price of the prescribed drugs (the required co-payment by the patient).

Full accounting of the costs would necessarily include indirect costs (overhead, or the cost of operations of the HII headquarters in Tirana as well as each of the Regional HII Offices). These will assumed to be fixed on an annual basis (plus the usual inflation-adjustment increase), unless total staffing increases substantially at the Health Center level, though subject to annual increases in line with the average for the personnel budget as a whole.

Both direct and indirect costs would also include depreciation of equipment and buildings, as well as replacement of consumable supplies. But the latter are presumably covered under the line item 602 in the consolidated budgets of HCs, and the former (all capital costs, however depreciated) will not be estimated at this time, because of the complications that are bound to result from a large increase in capital spending (donations) to be made by the World Bank in 2008. Thus, this study of expenditures will include operating costs only, with expenditures on prescription drugs considered an integral part of operating costs.

Also in this study, determining the cost of serving groups that are not eligible for HII benefits (maybe half the population) would require estimation of marginal costs at the HCs where persons are to be added¹² (where it is not now provided) even if the MBP is to be assured for remote HCs¹³, which is beyond the scope of this exercise.

generate a cost that is not related to the reality that currently exists in the form of the HII organization that is tasked by government to do the best it can with the resources available. Hence, estimating the MBP costs based on what is being spent, plus what is being added, is the second best approach. This is the approach followed in this study.

¹² For the HCs that are underused and/or overstaffed, the marginal costs are essentially zero, except for the added prescription drugs that may be needed for each added MBP visit. If one were to consider adding services, there would be a positive marginal cost, as well as for some very busy HCs, where more staff may be needed. It is beyond the scope of this study to determine which HCs are in which condition, and how much the marginal cost would be in each.

DESCRIPTION OF DATA SETS AND DATA SOURCES

There are different sources of data utilized in this study.

- Encounter forms developed and initiated by the PRO Shëndetit Project. In the frame of the “Health System Information Management Project”, the PRO Shëndetit Project is implementing technical assistance in five Prefectures. As part of this effort, a data base has been created through the recording of all encounter forms filled out by Health Center doctors and nurse/midwife for every patient encounter at the health center. Data entered on an encounter form includes, among other information, a number of codes for: the specific Health Center, the prescribing doctor, the patient treated (noted by ID number), the diagnosis (ICD-9 code), and the date of the visit. Data sets thus created were used to generate the number of visits for each HC of five Prefectures. We chose to use the data set of this project as we concluded that, at present, the monthly M2 forms of HII submitted by each GP do not identify a particular visit or an individual with particular visits or prescriptions (only by doctor and by Health Center). Using M2 data only, it would not be possible to know the expenditures on prescriptions paid by HII per diagnosis or condition. Also, total visits, while not able to be linked to specific conditions in the encounter form, can be ascribed to the Health Center and doctors in the five Prefectures.
- The data set on drugs reimbursed for respective diagnosis of ICD-9 list during period July 1, 2006 through June 30, 2007 is provided by the HII software for the prescriptions. Based on the information we extracted for the total number of prescriptions and total cost of drugs per diagnosis (ICD-9 list) per health center, we developed prescription data by MBP condition by region (and HC) totals, and by HC in the sample of five regions. The data set on HII expenditures on prescription drugs includes particular diagnosis codes (ICD-9) that can be linked directly to some of MBP conditions for a particular encounter. However, there was a difficulty to relate all MBP conditions with specific ICD-9 diagnosis. This difficulty comprised one of limitations concerning data utilized in this study. In next part, we provide details regarding this limitation.
- Budget data were provided by the HII for all HCs of five Prefectures for the year 2007. These are included in the estimation of recurrent costs.¹⁴ More specifically, those data are (for each health center) as follows: total expenditures through line item 600 (salaries), total expenditures through line item 601 (social insurance, etc.), and estimated total expenditures through line item 602 (operations and maintenance). For each health center, the 2007 budget was calculated as 94% of the total historical budget (under more fragmented conditions) extrapolated forward from past data.
- Staffing data and patient/population registration data were provided by the HII for all HCs of the five prefectures for the year 2007. While the number of HCs was consolidated in 2007, as compared to 2006, the number of doctors, nurses, and other staff, were counted by assigning them from their past HC of employment to their new HC of employment. Other data provided from HII used as basis for the MBP cost estimate were the number of registered persons in the health care facility catchment areas, number of doctors, number of nurses and other staff.

¹³ For remote or underused facilities, whether or not newly insured persons could be served at a remote Health Center would depend on whether it would be able to provide the MBP in its entirety, even though they may never see patients having some of the MBP conditions, will depend upon the regular availability of the doctor(s) assigned to that Health Center (even if not present every day) and will depend upon whether the local pharmacy has the needed, prescribed drugs in stock. It is beyond the scope of this study to determine whether this is true or the extent to which, if it may be or may not be, it would affect the cost estimate(s). If there are, in fact, some areas of Albania where there are residents without any access to a Health Center or Health Post that could provide the MBP, it would be very difficult to predict adequately how much it would cost to provide them, simply because the incidence and prevalence of the conditions for such sparse population groups in remote areas would be very difficult to predict with enough precision.

¹⁴ Exactly 85% of Total Budget for 2006 (increased as below) + 15% reserved for performance bonus payments. It is presumed that actual budget numbers for the line items 600, 601, and 602 are available by Health Center in HII's data.

ASSUMPTIONS OF THE ANALYSIS

The MBP includes all those services specified¹⁵ in Article of the standard Health Center contract signed by all Health Centers for the year 2007. This estimate will include direct operating costs, and will be based on assumptions made as follows:

- All aspects of current law relating to the operation of Health Centers do not change (e.g., it does not assume universal coverage, or even expansion of coverage, for HII benefits).
- It is acknowledged that pertinent aspects of the organization and delivery of MBP services at HII Health Centers (that might affect costs) are changing this year and next (single-source financing, governance, autonomy, and performance-based payments being phased in).
- Estimated costs for the period that we are considering in our analysis are based on what HII had spent to provide reimbursed drugs and what it plans to spend on recurrent costs for the fiscal year 2007 on the MBP (Article 5 of the 2007 Health Center contracts); to that will also be added the value of those supplies and equipment to be received from the World Bank, under the Modernization Project.¹⁶
- Performance-based payments, which are part of direct costs, will affect what will be expended at the end of the fiscal year versus what was budgeted at the beginning of that given fiscal year. However, since the budgeting of funds for the successive fiscal year that Ministry of Finance (MoF) transfers to the HII are based on historical budgeting, and, since 2007 is the very first year of implementation of the payment for performance mechanism, we are assuming that the budget for this fiscal year allocated to the HII will be used up.
- Estimated costs will include, theoretically,¹⁷ those incurred in treating uninsured patients who are obligated to pay a fee for the services and 100% of the cost of any prescriptions written during the visit. Fees collected [if any] will not be considered an offset to the costs (except to the extent they are remitted to HII, which is reportedly insignificant). Number of visits by the uninsured will be derived from the encounter forms used in the five pilot regions.¹⁸

LIMITATIONS

In this study, there are different limitations due to restrictions of data sets, methods used, and external factors. Below we discuss these one by one.

The methodology used in this study is the traditional analysis of the expenditures made to produce the conditions/services listed in the MBP. This study does not attempt to model least-cost production

¹⁵ This list is reportedly still being refined by the MoH Committee responsible for creating it, but the final version is said to be different from that in the contract in very minor ways.

¹⁶ There may well be supplies and equipment that are needed, according to CPGs or standards of care, but that are NOT included in the World Bank package, to treat some of the MBP conditions that are therefore not available at the Health Centers. But until a list of the specific range of treatments is available that may be indicated by multiple variations of a specific diagnosis or condition on the MBP list, there will be no basis for estimating those costs, which may not be incurred anyway if HII does not provide the supplies, or the requisite training, needed to meet the standards of care for those conditions.

¹⁷ Because most Health Centers have sufficient staff to handle additional visits above their current level (other evidence suggests), it is presumed that staff costs are a fixed cost, not a variable cost, for purposes of this estimate, and therefore number of visits is used as a denominator for average cost, if desired, and not as a partial determinant of total costs themselves.

¹⁸ There is an argument to be made that GPs underreport visits by the uninsured because they are supposed to collect Lek 400 per visit (it was Lek 200 prior to August 2007) from them and forward that income on to the HII, and they would therefore prefer that HII not have this information – whether they collected it or not. Various reasons are put forth as to why they could not be bothered to do so (no gain to themselves, of course), and whether informal payments are made to the GPs by both insured and uninsured. In any event, there is reason to doubt whether uninsured visits are fully reported. At the same time, it should be noted that the activity payment of up to 10% gives an incentive to overreport visits. So, data on visits may not be accurate (for either or both reasons) and are brought forth here as a possible denominator for calculating an average cost figure. The above caveats should be noted when such an average cost per visit is reported.

levels of the MBP or to measure current levels of inefficiency that may be embodied in the results. It will include many Health Centers which are overstaffed and underused, and whose costs are therefore not representative of what the MBP would cost at those Health Centers if efficiency were the primary goal. Therefore in this study we are not able to estimate inefficiencies in the service production derived by overstaffing. Inefficiencies in the HCs cannot be directly determined from the results, although some evidence on which Health Centers and doctors are relatively efficient producers and on which are relatively inefficient producers are implied by the data.

Two other limitations are related to the fact that not each condition included in the MBP (as provided by the Doctors Department of the HII) will have a corresponding diagnosis identified according to the ICD-9 codes. First, some conditions included in the MBP list represent symptoms of multiple and/or different diseases than those (or in addition to those) conditions listed in the MBP (e.g., headache, diarrhea and vomiting) – these being symptoms of many diseases rather than of specific diagnoses to specific diseases that would require specific drugs that might have been prescribed by GPs treating them. Other similar symptoms that we identified were lumbago (or lower back pain), depression, anxiety, headache, diarrhea, nausea, febrile convulsions, and high fever. Second, the MBP list also includes services that do not necessarily need medications, and therefore do not correspond to any specific diagnosis in the ICD-9 list, such as the subcategory of child care (including child growth and development, immunization) and the subcategory of antenatal and reproductive health care (including family planning, monitoring of normal pregnancy, post-partum care, and breast check-up). In order to overcome these problems, costs of drugs by MBP condition were imputed to Health Centers for 2006-2007 and are calculated by imputing appropriate ICD-9 codes for each MBP condition.

Furthermore, there are also some prescriptions paid by HII that do not get captured by one of the MBP conditions, such as treatment of cancer, internal gland diseases, and some intestinal track diseases. This comprised a non-negligible cost to the overall expense of HII for the reimbursements of drugs. Further, below in this report we provide details of these finding. Also it needs to be mentioned that costs reimbursed by the HII may be only a part of the total costs of the MBP, as patients may also incur out-of-pocket costs to obtain the drugs needed in the MBP. This is because as mentioned above HII reimburses medication within the range of 50% to 100% of the total costs.

Another limitation is related to the fact that HII pays all salaries for the personnel without making any distinction on what allocation of time that the staff allots to the production of MBP to the clients as compared to the time it spends on other activities, such as community educational activities, visiting and prescribing for the categories of diseases that are not included in the MBP list and other administrative duties. To the extent to which we derive a total cost per condition, including both HC operating costs and prescription expenditures, we will attempt to apportion HC operating costs to MBP conditions and to non-MBP conditions, according to ICD-9 codes listed with the prescription expenditures.

It should also be acknowledged that the prescription expenditures for 2007 are estimates based on actual data for only the first six months of 2007. The estimates for the last six months of 2007, per Health Center, and per condition, are derived by growing the total prescription expenditures per condition per Health Center by the exact same growth rate of expenditures for the first six months of 2007, as compared to the last six months of 2006. While these two periods are not the same seasonal periods of the calendar year, and thus will include some error from seasonality differences, such differences are likely to be small compared to those attributable to the behaviors of prescribing physicians – who are under a number of restrictions regarding prescribing – and to the list of reimbursable prescriptions (which changed during 2006), not to mention the changed behavior of the patients' responses to the Leke 100 per prescription flat fee which was imposed by the HII on 2006. These restrictions were the result of a very large budget overrun of almost 1 billion Leke which occurred in 2005, and which led to the subsequent restrictions which were imposed in 2006. Thus, from the last six months of 2005 to the first six months of 2006, total expenditures on drugs by HII in the five prefectures declined 8.6%, and from those first six months of 2006 to the last six months of 2006, declined another 24.2 %. The data that we have calculated for the first six months of 2007, however, show a rise of 13.3% over the last six months of 2006.

Various methods for estimating the second six months of 2007 for the five prefectures were considered, in light of the above data. But, since it is evident that there is no reliable guide or method for reliably estimating the total for these last six months (given the volatility of the previous three six-month periods and given the severe restrictions placed on prescribing and filling prescriptions), it was decided that the second six months would be estimated simply by continuing the trend line established from the immediately preceding six-month period – the last half of 2006. Thus, the total expenditures per condition per Health Center were estimated to be 13.3 % higher in the last six months of 2007 than they were in the first six month of 2007. As will be shown, this assumption leads us to a figure for all of 2007 that is only 4% higher than the total for all of 2006. Were the growth rate for the last half of 2007 to be doubled (to 26.6%) over the first half of 2007, the total drug expenditures for the five prefectures would be only 11% higher than they were in 2006. Since budgets for prescription drugs are allocated by prefecture, it is up to the HII Regional Officer to decide how to allocate budget among the Health Centers within each Region. Even if the growth in drug expenditures increased two-fold (last half of 2007 over first half of 2007), it appears that the total spending would still be under the budget for all five prefectures studies, by a substantial amount. Thus, while it is evident that HII drug spending is likely to continue to be unpredictable and volatile, it is not totally unreasonable to derive an estimate for total HII drug expenditures in these five prefectures by the method described.

Apart of the limitations related to data sets and methodology of this study, there are others related to the behaviors of patients and/or providers. For example, related to patient behavior, there are components of the MBP services provided only in polyclinics i.e. referral from the specialists. Costs of polyclinics in our five prefectures are covered by the MoH. These costs are not captured in our calculations.

Also, while the MBP is approved by MoH, in detail, it is not at all certain how it can be implemented at the health centers. At present, the knowledge and resources needed to implement it are lacking at most health centers, and the incentives that would be needed to motivate doctors to adopt the treatment protocols and clinical practice guidelines of Family Practice are not in place, and do not seem to be at all easy to create.

Other limitations are related with the fact that, in a patient's visit, a provider might have provided services for one, two, or multiple conditions which that patient might have had (especially chronically ill patients representing a substantial group of beneficiaries of HII). This visit is recorded as one visit in the encounter form.

FINDINGS OF THE COST ANALYSIS

The following section presents the findings of the cost analysis in five prefectures: 1) an overview of the PHC system, 2) utilization of PHC services, and 3) costs of PHC services, by type of cost (recurrent and drug costs) and by MBP condition. Data describing the PHC system, utilization of services, and costs are presented for the combined five prefectures and then for each of the prefectures. In this manner, the overall situation in all five prefectures is first analyzed, and then is followed by a more detailed analysis of variations among the prefectures.

GENERAL OVERVIEW OF PHC SYSTEM

GENERAL OVERVIEW OF THE NETWORK OF HEALTH CENTERS AND POPULATION COVERAGE IN THE FIVE PREFECTURES

The five prefectures from which data were collected are shown in Table 1A to have 151 Health Centers, ranging from 21 in Lezhe to 39 in Korçe. These 151 HCs comprise almost 40% of all 405¹⁹ Health Centers in

Albania and cover a population of about 1.3 million. The Health Centers are categorized according to whether they are located in an *urban* area, a *rural* area, or a *mix of urban and rural* areas. As shown in Table 1B, the Health Centers in rural areas comprise more than three-fourths (76%) of the Health Centers in the

five prefectures, while the Health Centers in urban areas comprise only one-sixth of all Health Centers (17%), with the remainder are in mixed areas (7%).

FIGURE 1A: NUMBER OF HEALTH CENTERS BY UMR AND PREFECTURE

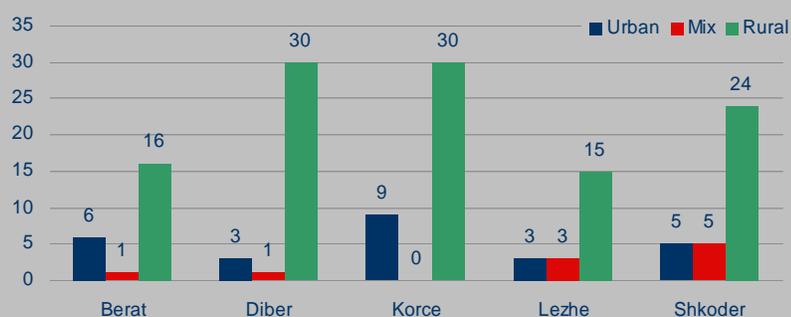


TABLE 1A: NUMBER OF HEALTH CENTERS BY UMR AND PREFECTURE

Prefecture	Type of Health Centers			Total
	Urban	Mix	Rural	
Berat	6	1	16	23
Diber	3	1	30	34
Korçe	9	0	30	39
Lezhe	3	3	15	21
Shkoder	5	5	24	34
TOTAL	26	10	115	151

Source: HII for all HCs of the 5 prefectures for 2007

¹⁹ The 640 groups of facilities (ambulancas, health posts, and health centers) were consolidated to 405 when the HII health reform took effect.

Comparing the distribution of Health Centers across the five prefectures (Figure 1B), Diber has the largest percent of rural HCs at almost 90%, while Berat and Korçe have relatively larger percentages of urban HCs (23% to 26%).

FIGURE 1B: DISTRIBUTION OF HCS BY UMR AND PREFECTURE

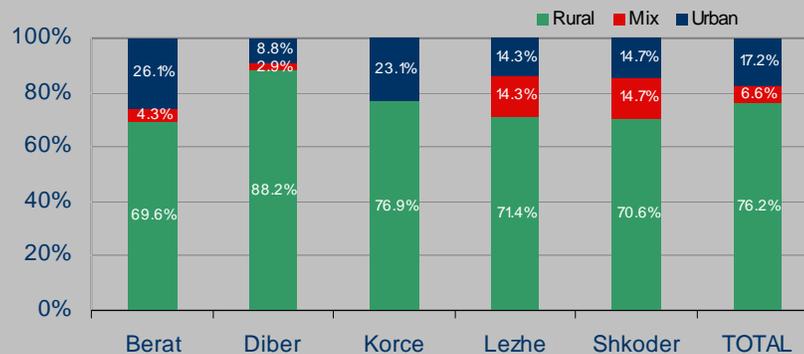


TABLE 1B: DISTRIBUTION OF HCS BY UMR AND PREFECTURE

Prefecture	Percent of HC by UMR per Prefecture				Percent of HC by Prefecture per UMR			
	Urban	Mix	Rural	Total	Urban	Mix	Rural	Total
Berat	26%	4%	70%	100%	23%	10%	14%	15%
Diber	9%	3%	88%	100%	12%	10%	26%	23%
Korçe	23%	0%	77%	100%	35%	0%	26%	26%
Lezhe	14%	14%	71%	100%	12%	30%	13%	14%
Shkoder	15%	15%	71%	100%	19%	50%	21%	23%
TOTAL	17%	7%	76%	100%	100%	100%	100%	100%

Source: HII for all HCs of the 5 prefectures for 2007

Table 2A shows the distribution of registered populations covered by the Health Centers according to the location (UMR, or *urban/mixed/rural*) in each of the five prefectures. The total of 1.3 million persons covered by the 151 Health Centers in the five prefectures are mostly in rural areas (55% of the total). Table 2B

shows the distribution of the registered populations by UMR and by prefecture, in the same way that Table 1A showed such a distribution of Health Centers. It is notable that one-sixth of the Health Centers (in urban areas) cover more than the one-third of the populations that reside in urban areas, and that the three-fourths of the Health Centers (in rural areas) cover the 55% of the populations in the prefectures that reside in rural areas.

FIGURE 2A: REGISTERED POPULATIONS AT HCS BY UMR AND PREFECTURE

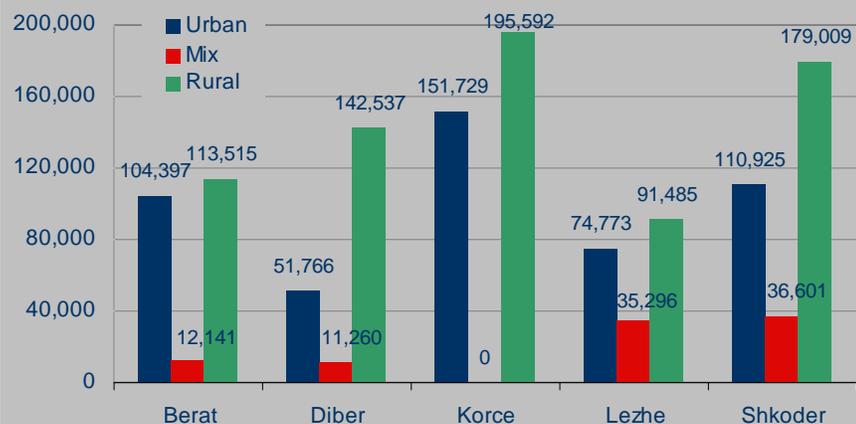


TABLE 2A: REGISTERED POPULATIONS AT HEALTH CENTERS BY UMR AND PREFECTURE

Prefecture	Type of Health Centers			Total
	Urban	Mix	Rural	
Berat	104,397	12,141	113,515	230,053
Diber	51,766	11,260	142,537	205,563
Korce	151,729	0	195,592	347,321
Lezhe	74,773	35,296	91,485	201,554
Shkoder	110,925	36,601	179,009	326,535
TOTAL	493,590	95,298	722,138	1,311,026

Source: HII for all HCs of the 5 prefectures for 2007

Similar to the distribution of Health Centers, Diber shows about 70% of the registered population residing in rural areas, with Berat and Korce presenting the largest percentages of urban populations (44%-45%).

TABLE 2B: DISTRIBUTION OF REGISTERED POPULATIONS BY UMR AND PREFECTURE

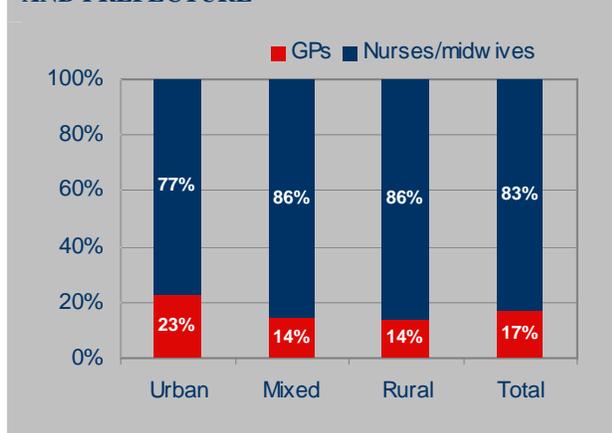
Prefecture	Percent of Population by UMR per Prefecture				Percent of Population by Prefecture per UMR			
	Urban	Mix	Rural	Total	Urban	Mix	Rural	Total
Berat	45%	5%	49%	100%	21%	13%	16%	18%
Diber	25%	5%	69%	100%	10%	12%	20%	16%
Korce	44%	0%	56%	100%	31%	0%	27%	26%
Lezhe	37%	18%	45%	100%	15%	37%	13%	15%
Shkoder	34%	11%	55%	100%	22%	38%	25%	25%
TOTAL	38%	7%	55%	100%	100%	100%	100%	100%

Source: HII for all HCs of the 5 prefectures for 2007

GENERAL OVERVIEW OF HEALTH CENTER STAFFING RELATIVE TO POPULATION COVERAGE IN THE FIVE PREFECTURES

Staffing at the Health Centers in the five prefectures by UMR type of Health Center is shown in Table 3A below. Nurses/midwives are relatively more important in rural areas (1,724) compared to urban areas (705), the urban total being 2.4 times the number of nurses/midwives working in rural Health Centers. In urban Health Centers, each GP is supported by 3.3 nurses/midwives, compared to rural areas where each GP is supported by over 6 nurses/midwives, owing to a disproportionate deployment of GPs to urban areas, and a disproportionate deployment of nurses/midwives to rural areas. In rural areas, relatively higher numbers of nurses/midwives may meet the greater need for community-level outreach

FIGURE 3A: PERCENT OF STAFF BY TYPE, UMR AND PREFECTURE



and other forms of nursing care in rural areas. Or, this may be evidence of a misallocation of nurses/midwives as between urban and rural areas, and/or simply a higher total deployed than may be needed nationwide.

TABLE 3A: NUMBER OF STAFF BY TYPE BY UMR AND PREFECTURE

Prefecture	Type of Health Centers									Total		
	Urban			Mixed			Rural					
	GP	Nurse/midwife	Total Staff	GP	Nurse/midwife	Total Staff	GP	Nurse/ midwife	Total Staff	GP	Nurse/midwife	Total Staff
Berat	47	162	209	5	27	32	47	307	354	99	496	595
Diber	18	69	87	5	36	41	42	414	456	65	519	584
Korce	70	223	293	0	0	0	89	425	514	159	648	807
Lezhe	30	106	136	14	72	86	40	163	203	84	341	425
Shkoder	46	145	191	16	103	119	63	415	478	125	663	788
TOTAL	211	705	916	40	238	278	281	1,724	2,005	532	2,667	3,199
PERCENT	7%	22%	29%	1%	7%	9%	9%	54%	63%	17%	83%	100%

Source: HII for all HCs of the 5 prefectures for 2007

The percentage distributions of the types of staff by UMR Health Centers and by prefecture are shown below for GPs in Table 3B and for nurses/midwives in Table 3C. Note that Table 3B and Table 3C show the difference in distributions among Health Centers between GPs and nurses/midwives. On the one hand, while 40% of all GPs are deployed in urban Health Centers, only 26% of nurses/midwives are deployed there. On the other hand, while 53% of GPs are deployed in rural Health Centers, 65% of all nurses/midwives are deployed in rural Health Centers. Also, while there is little difference in the distribution of GPs and nurses/midwives among the prefectures, there are notable differences among the UMR type of Health Centers by prefecture.

TABLE 3B: DISTRIBUTION OF NURSES/MIDWIVES BY UMR AND PREFECTURE

Prefecture	Percent of GPs by UMR per Prefecture				Percent of GPs by Prefecture per UMR			
	Urban	Mix	Rural	Total	Urban	Mix	Rural	Total
Berat	47%	5%	47%	100%	22%	13%	17%	19%
Diber	28%	8%	65%	100%	9%	13%	15%	12%
Korce	44%	0%	56%	100%	33%	0%	32%	30%
Lezhe	36%	17%	48%	100%	14%	35%	14%	16%
Shkoder	37%	13%	50%	100%	22%	40%	22%	23%
TOTAL	40%	8%	53%	100%	100%	100%	100%	100%

Source: HII for all HCs of the 5 prefectures for 2007

TABLE 3C: DISTRIBUTION OF NURSES/MIDWIVES BY UMR AND PREFECTURE

Prefecture	Percent of Nurses/Midwives Staff by UMR per Prefecture				Percent of Nurses/Midwives Staff by Prefecture per UMR			
	Urban	Mix	Rural	Total	Urban	Mix	Rural	Total
Berat	33%	5%	62%	100%	23%	11%	18%	19%
Diber	13%	7%	80%	100%	10%	15%	24%	12%
Korce	34%	0%	66%	100%	32%	0%	25%	30%
Lezhe	31%	21%	48%	100%	15%	30%	9%	16%
Shkoder	22%	16%	63%	100%	21%	43%	24%	23%
TOTAL	26%	9%	65%	100%	100%	100%	100%	100%

Source: HII for all HCs of the 5 prefectures for 2007

Tables 4, 5, and 6 show how the populations are distributed by Health Center, by GP, and by nurse/midwife in each of the prefectures by UMR type of Health Center. The average registered population per Health Center is 8,682 for all five prefectures; the averages for Korce, Lezhe, and Shkoder are slightly higher, whereas the average for Berat is about 20% higher at 10,002, and for Diber is roughly one-fourth lower than the overall average. There are considerable differences in populations covered according to location of Health Center, with urban Health Centers covering an average of about 19,000 people, mixed Health Centers covering an average of 9,500 people, and rural Health Centers covering an average of about 6,300 people. Thus, the average urban Health Center covers about three times the registered population of a rural Health Center. Deviations from these averages are notable for urban Health Centers in Lezhe and Shkoder, where each urban Health Center covers an average of about 25,000 and 22,000 people, respectively.

FIGURE 4: REGISTERED POPULATION PER HC BY, UMR AND PREFECTURE

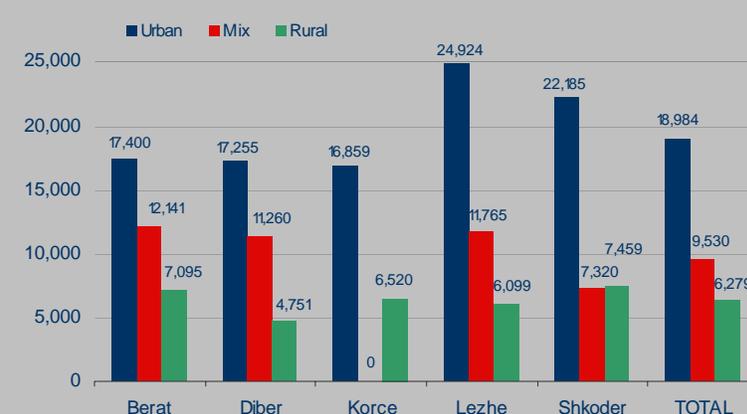


TABLE 4: REGISTERED POPULATIONS PER HCS BY UMR AND PREFECTURE

Prefecture	Type of Health Centers			Total
	Urban	Mix	Rural	
Berat	17,400	12,141	7,095	10,002
Diber	17,255	11,260	4,751	6,046
Korce	16,859	0	6,520	8,906
Lezhe	24,924	11,765	6,099	9,598
Shkoder	22,185	7,320	7,459	9,604
TOTAL	18,984	9,530	6,279	8,682

Source: HII for all HCs of the 5 prefectures for 2007

Table 5, however, shows that differences in the averages of populations covered by Health Centers are made up for by deployment of GPs by Health Center that results in a remarkably even distribution of registered populations by doctor, which average close to 2,400 in all UMR Health Centers in all prefectures (with the sole exception of rural Health Centers in Diber that average about 3,400 people per doctor). These relatively even distributions are reflective of the HII efforts to motivate GPs to deploy to remote, rural areas in return for higher compensation. So, while there has been some consolidation of Health Centers for administrative and efficiency reasons in preparing for the reform effective January 1, 2007, the deployment of doctors still seems to be evenly dispersed among the population, even though there are more Health Centers relative to population in rural areas.

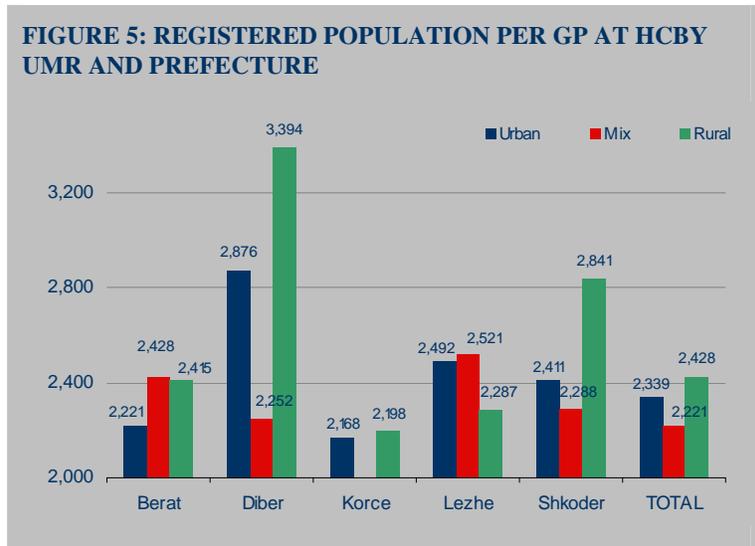
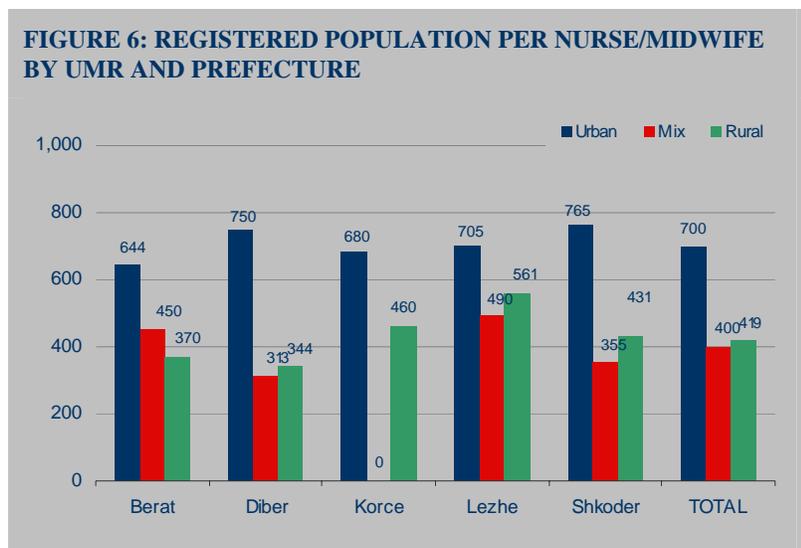


TABLE 5: REGISTERED POPULATIONS PER GPS AT HCS BY UMR AND PREFECTURE

Prefecture	Type of Health Centers			All HCs
	Urban	Mixed	Rural	
Berat	2,221	2,428	2,415	2,324
Diber	2,876	2,252	3,394	3,163
Korçe	2,168	0	2,198	2,184
Lezhe	2,492	2,521	2,287	2,399
Shkoder	2,411	2,288	2,841	2,612
TOTAL	2,339	2,221	2,428	2,415

Source: HII for all HCs of the 5 prefectures for 2007

Such even distributions (of GPs relative to registered populations) are not as evident for nurses/midwives, which, until January 1, 2007, were hired, deployed, and paid by the Ministry of Health. It is also evident from Table 6 that nurses and other staff are relatively more plentiful in mixed and rural Health Centers, where each staff person covers about 400



people. In urban Health Centers, each nurse/midwife

covers an average of about 700 people. The deviations across prefectures in these averages are not that notable, although the population per nurse/midwife in rural areas is about half of what is in all urban areas. As noted before, the more plentiful supply of nurses/midwives in mixed and rural Health Centers may indicate a greater need for nurses/midwives to perform community-level primary health care, or at least the capacity to provide it. However, given that a nurse/midwife in mixed or rural areas serves an average of some 400 people, this would also indicate an excess supply relative to need and/or demand. In Diber, a nurse/midwife covers some 344 people, on average.

Table 7 shows the average number of staff by type of staff per Health Center by UMR and by prefecture. Although the average number of doctors per Health Center is much lower for rural Health Centers (2) than for urban Health Centers (8), the average number of people covered by each doctor is virtually the same (about 2,400) for all areas (shown in Table 5), because the deployment of doctors closely parallels the distribution of the population, regardless of number of Health Centers in each type of location.

TABLE 6: REGISTERED POPULATIONS PER NURSE/MIDWIFE AT HCS BY UMR AND PREFECTURE

Prefecture	Type of Health Centers			All HCs
	Urban	Mixed	Rural	
Berat	644	450	370	464
Diber	750	313	344	396
Korce	680	0	460	536
Lezhe	705	490	561	591
Shkoder	765	355	431	493
TOTAL	700	400	419	492

Source: HII for all HCs of the 5 prefectures for 2007

FIGURE 7: AVERAGE NUMBER OF HC STAFF BY UMR AND OTHER

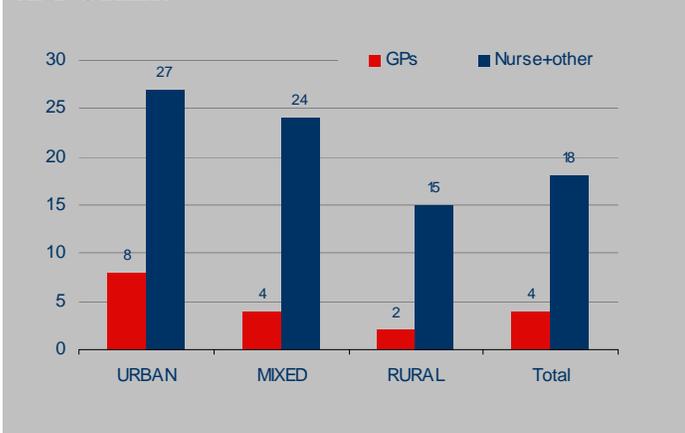


TABLE 7: AVERAGE NUMBER OF HC STAFF BY UMR AND PREFECTURE

Prefecture	Type of Health Centers									All		
	Urban			Mixed			Rural					
	GPs	Nurse/Midwives	All Staff	GPs	Nurse/Midwives	All Staff	GPs	Nurse/Midwives	All Staff	GPs	Nurse/Midwives	All Staff
Berat	8	27	35	5	27	32	3	19	22	4	22	26
Diber	6	23	29	5	36	41	1	14	15	2	15	17
Korce	8	25	33	0	0	0	3	14	17	4	17	21
Lezhe	10	35	45	5	24	29	3	11	14	4	16	20
Shkoder	9	29	38	3	21	24	3	17	20	4	20	23
TOTAL	8	27	35	4	24	28	2	15	17	4	18	21

Source: HII for all HCs of the 5 prefectures for 2007

UTILIZATION OF PHC SERVICES

The encounter form is filled out for every visit to a Health Center facility, or by a health center staff member on a home visit. Thus, it records all encounters with medical personnel, not just with doctors. Table 8A shows the total number of encounters (visits) made to Health Centers by URM for each and all prefecture, and Table 8B shows the average number of encounters (visits) per health center estimated for 2007. By counting only those visits to doctors and by isolating those costs associated with producing those visits (including any costs of drugs prescribed during the visit), however, we can isolate the main use of HII's resources in making expenditures on the MBP conditions. (Since Health Centers comprise multiple facilities, visits to a Health Center include all those in the facilities (including nearby Health Posts) comprising that Health Center.)

Some 60% of all encounters with medical staff occur in rural Health Centers and are attended by both GPs and nurses/midwives (Table 8A). Berat, Korce, and Shkoder prefectures account for a large percentage of encounters (70%). Lezhe and Diber Health Centers, on the other hand, provide the remaining 30%.

FIGURE 8A: NUMBER OF PHC VISITS TO HEALTH CENTERS BY URM AND PREFECTURE

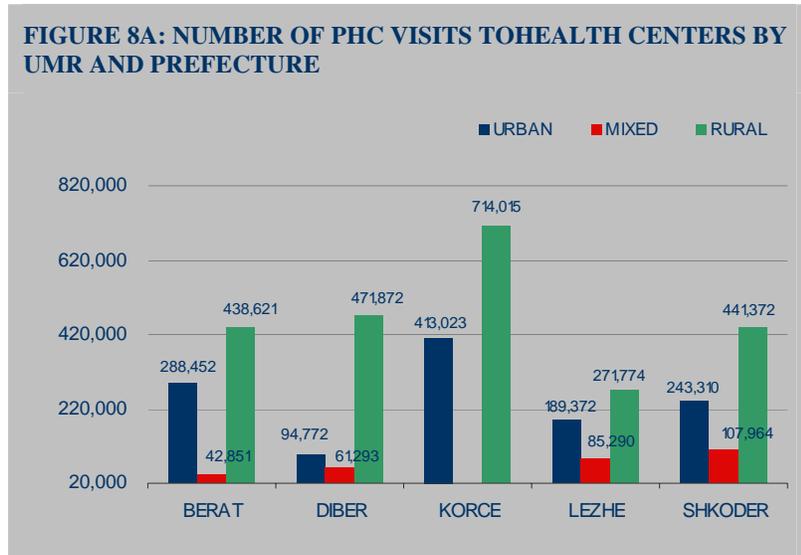


TABLE 8A: NUMBER OF PHC VISITS TO HEALTH CENTERS BY URM AND PREFECTURE

Prefecture	Type of HC						Total #	Total %
	Urban #	Urban %	Mixed #	Mixed %	Rural #	Rural %		
Berat	288,452	23%	42,851	14%	438,621	19%	769,924	20%
Diber	94,772	8%	61,293	21%	471,872	20%	627,937	16%
Korce	413,023	34%	-	-	714,015	31%	1,127,038	29%
Lezhe	189,372	15%	85,290	29%	271,774	12%	546,436	14%
Shkoder	243,310	20%	107,964	36%	441,372	19%	792,647	21%
Total	1,228,929	100%	297,398	100%	2,337,654	100%	3,863,983	100%
Total %	32%		8%		60%		100%	

Source: HIS encounter form

When the average number of encounters (by GP and nurse/midwife) per day are compared between urban and rural Health Centers, rural Health Centers serve an average of 65 patients per day compared to 151 patients per day in urban Health Centers. Consequently, urban Health Centers provide 2.3 times the number of patient encounters per day.

TABLE 8B: AVERAGE NUMBER OF PHC VISITS TO HEALTH CENTER BY UMR AND PREFECTURE

Prefecture	Type of HC						Total	
	Urban		Mixed		Rural			
	Per year	Per day	Per year	Per day	Per year	Per day	Per year	Per day
Berat	48,075	154	42,851	137	27,414	88	33,475	107
Diber	31,591	101	61,293	196	15,729	50	18,469	59
Korce	45,891	147	0	0	23,801	76	28,898	93
Lezhe	63,124	202	28,430	91	18,118	58	26,021	83
Shkoder	48,662	156	21,593	69	18,391	59	23,313	75
TOTAL	47,267	151	29,740	95	20,327	65	25,589	82

Source: HIS encounter form

Table 9A shows the lower number of visits made only by doctors (about 1 million), and Table 9B shows the average number of doctor visits per Health Center in 2007. Since these visits are the only visits associated with the major expenditures for prescription drugs, these data will be used as the denominator in determining total costs per doctor visit and per Health Center, by UMR and by prefecture. Over the five prefectures, GPs see an average of 6.1 patients per day, or about 1,900 per year. GPs in urban Health Centers, however, see roughly twice as many patients on average (8.7 patients per day) as compared to the averages in mixed Health Centers (4.8 patients per day) and in rural Health Centers (4.4 patients per day).

TABLE 9A: NUMBER OF PHC VISITS BY GPs BY UMR AND PREFECTURE

Prefecture	TYPE OF HC						Total #	Total %
	Urban #	Urban%	Mixed #	Mixed %	Rural #	Rural %		
Berat	137,984	11%	8,683	3%	69,178	3%	215,845	21%
Diber	33,970	3%	12,526	4%	37,692	2%	84,188	8%
Korce	211,028	17%	-	-	169,858	7%	380,886	38%
Lezhe	64,433	5%	14,719	5%	41,193	2%	120,345	12%
Shkoder	123,157	10%	24,167	8%	63,135	3%	210,459	21%
Total	570,572	46%	60,095	20%	381,056	16%	1,011,723	100%
Total %	56%		6%		38%		100%	

Source: HIS encounter form

FIGURE 9B: AVERAGE NUMBER OF PHC VISITS BY GPS PER DAY BY UMR

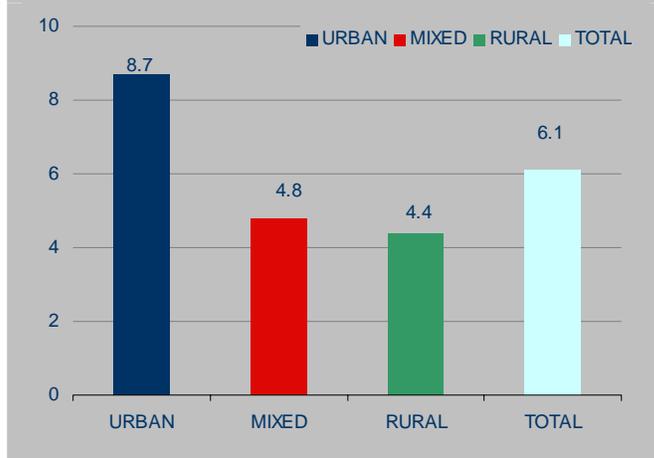


TABLE 9B: AVERAGE NUMBER OF PHC VISITS BY GPS BY UMR AND PREFECTURE

Prefecture	Type of Hcs						Total	
	Urban		Mixed		Rural			
	Per year	Per day	Per year	Per day	Per year	Per day	Per year	Per day
Berat	2,936	9.4	1,737	5.6	1,472	4.7	2,180	7.0
Diber	1,887	6.0	2,505	8.0	897	2.9	1,295	4.2
Korce	3,015	9.7		-	1,909	6.1	2,396	7.7
Lezhe	2,148	6.9	1,051	3.4	1,030	3.3	1,433	4.6
Shkoder	2,677	8.6	1,510	4.8	1,002	3.2	1,684	5.4
Total	2,704	8.7	1,502	4.8	1,371	4.4	1,902	6.1

Source: HIS encounter form

Table 9C shows the larger number of visits made by nurses/midwives (about 2.9 million), and Table 9D shows the average number of visits per nurse/midwife per Health Center. Since these visits are generally distinct from the visits made by doctors and consume resources somewhat independently of physician-related expenditures, most of their recurrent (salaries and benefits) costs should be considered separately from physician-related recurrent costs (some nurse resources are used to support GPs' activities, however, and thus should be included in GPs-related costs). The number of nurses/midwives staff is disproportionately greater, relative to population, in rural areas as compared to urban areas, and see more patients in rural areas.

Some 69% of nurses/midwives visits occur in rural Health Centers and only 23% in urban Health Centers. Over the five prefectures, nurses/midwives see an average of 3.4 patients per day, or almost 1,100 per year. Nurses/midwives based in urban Health Centers, however, see fewer patients on average per day – 3.0 patients per day as compared to 3.2 patients per day by nurses/midwives in mixed Health Centers and 3.6 patients per day in rural Health Centers. Although nurses/midwives provide other support and administrative activities as part of their job, the average number of PHC visits per day remains low at less than 4 per day across UMR types of Health Centers.

TABLE 9C: NUMBER OF PHC VISITS BY NURSES/MIDWIVES BY UMR AND PREFECTURE

Prefecture	Type of HCs						Total #	Total %
	Urban #	Urban %	Mixed #	Mixed %	Rural #	Rural %		
Berat	150,468	23%	34,168	14%	369,443	19%	554,079	19%
Diber	60,802	9%	48,767	21%	434,180	22%	543,749	19%
Korce	201,995	31%	-	-	544,157	28%	746,152	26%
Lezhe	124,939	19%	70,571	30%	230,581	12%	426,091	15%
Shkoder	120,153	18%	83,797	35%	378,237	19%	582,187	20%
Total	658,357	100%	237,303	100%	1,956,598	100%	2,852,258	100%
Total %	23%		8%		69%		100%	

Source: HIS encounter form

FIGURE 9D: AVERAGE NUMBER OF PHC VISITS BY NURSE/MIDWIFE BY UMR

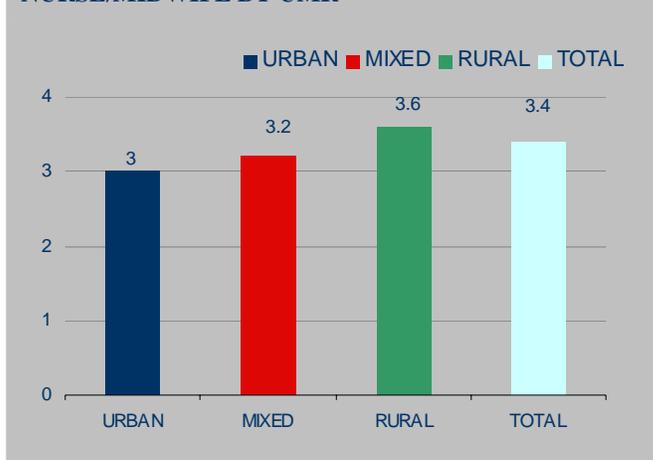


TABLE 9D: AVERAGE NUMBER OF PHC VISITS BY NURSE/MIDWIFE BY UMR AND PREFECTURE

Prefecture	Type of HC						Total	
	Urban		Mixed		Rural		Per year	Per day
	Per year	Per day	Per year	Per day	Per year	Per day		
Berat	929	3.0	1,265	4.1	1,203	3.9	1,117	3.6
Diber	881	2.8	1,355	4.3	1,049	3.4	1,048	3.4
Korce	906	2.9			1,280	4.1	1,151	3.7
Lezhe	1,179	3.8	980	3.1	1,415	4.5	1,250	4.0
Shkoder	829	2.7	814	2.6	911	2.9	878	2.8
Total	934	3.0	997	3.2	1,135	3.6	1,069	3.4

Source: HIS encounter form

Table 9E shows the relative proportions of physician and nonphysician visits (encounters) in Health Centers. While only 26% of all visits are made to GPs, there is a marked difference in the proportion of visits to GPs between urban and rural areas. Almost half of all encounters in urban Health Centers are with GPs (46%), while those proportion (with GPs) are only 20% of encounters in mixed Health Centers and 16% in rural Health Centers. The proportion of encounters with GPs in urban areas is significantly lower than the average in Diber and in Lezhe—at 36% and 34%, respectively. In Diber, only 8% of PHC encounters are with GPs in rural Health Centers, while in Korce that percentage in rural Health Centers is three times higher (24%).

FIGURE 9E: GPS PHC VISITS AS A PROPOTION OF TOTAL PHC VISITS BY UMR

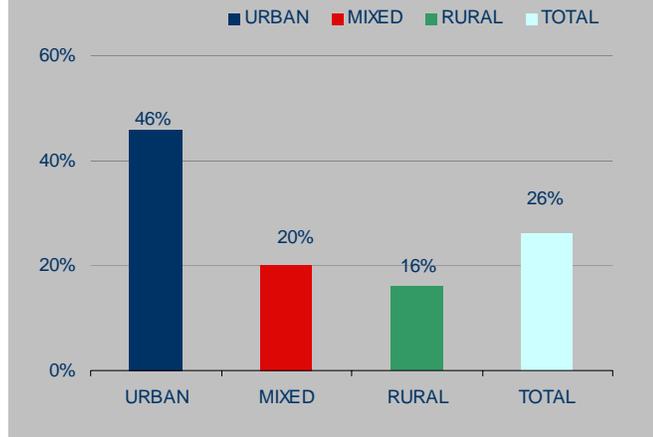


TABLE 9E: GP PHC VISITS AS A PROPOTION OF TOTAL PHC VISITS BY UMR AND PREFECTURE

Prefecture	Type of HCs			Total
	Urban	Mixed	Rural	
Berat	48%	20%	16%	28%
Diber	36%	20%	8%	13%
Korce	51%		24%	34%
Lezhe	34%	17%	15%	22%
Shkoder	51%	22%	14%	27%
Total	46%	20%	16%	26%

Source: HIS encounter form

Figure 10A shows the percent distribution of MBP conditions provided by GPs. Some 60% of the conditions are accounted for by chronic diseases: hypertension, diabetes, heart failure, angina ischemic heart disease, asthma/COPD, and arthritis.²⁰

Table 10A shows the total number of services provided by MBP condition²¹ and services provided per GP by MBP condition (ranked by frequency). The “condition” is identified by referring to the diagnosis code on the form. A “service” is not equivalent to a “visit” as more than one “service” can, and usually is, provided per visit. Table 10B shows the average number of services provided per GP by MBP condition. These data show that diagnoses for hypertension and respiratory infection are the two most commonly provided services by far (at 39% and 22% of total services, respectively), and that there is a large degree of variation in the number of services provided per GP by UMR Health

²⁰ Table 10A presents a distribution of MBP conditions served by Health Centers, not number of client prescriptions nor visits. The treatment of chronic care is relatively more costly owing to regular routine visits (usually monthly) for drugs and examinations in the Health Center and by specialists.

²¹ The conditions listed are the major categories of diagnoses that are listed in the MoH’s Minimum Benefits Package (MBP Conditions) that are required to be treated by Health Centers, and that are included in HII’s contract with each Health Center. There are some conditions treated that do not fall within the ICD-9 code definitions of MBP conditions (it can be seen in Table 19 that these account for about one-quarter of all prescriptions).

Center and by prefecture. For example, for hypertension (Table 10B), GPs in urban Health Centers in Korce provide at the highest rate (1,373 services per GP). This is over six times higher than rural GPs provide in Diber (217 services per GP). Although some of these differences can be accounted for by variations in the types of patients visiting Health Centers, the magnitude of the differences suggests major variations in the diagnostic classification. As will be shown in the next section, differences in prescribing patterns combine with differences in unit costs of the drugs prescribed to generate large differences in average cost of drugs per condition by UMR type and by prefecture.

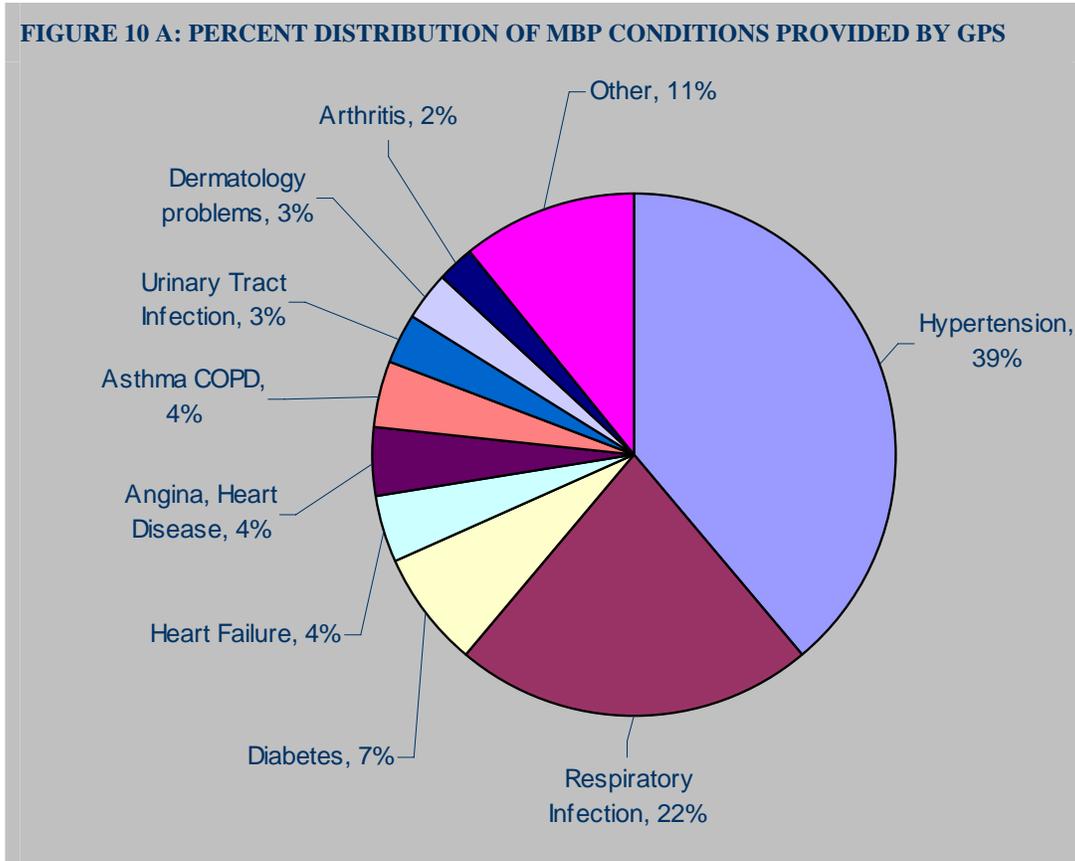


TABLE 10A: NUMBER OF PHC SERVICES PROVIDED BY GPS BY MBP CONDITIONS, UMR AND PREFECTURE

MBP	Hypertension	Respiratory Infection	Diabetes	Heart Failure	Angina, Ischemic Heart Disease	Asthma COPD	Urinary Tract Infection	Dermatology problems	Arthritis	Other ²²	All MBP Conditions TOTAL	All MBP Conditions %
Berat												
Urban	41,543	22,553	8,577	4,810	3,543	5,088	3,506	2,891	2,178	10,434	105,123	12%
Mix	1,561	1,509	448	216	127	236	229	193	59	656	5,232	1%
Rural	15,392	15,289	2,230	1,950	1,261	2,286	2,177	2,346	2,261	5,828	51,019	6%
Total	58,496	39,351	11,255	6,976	4,930	7,609	5,911	5,430	4,499	16,918	161,375	19%
Diber												
Urban	9,970	4,178	2,881	2,096	887	752	500	675	539	3,246	25,724	3%
Mix	1,644	3,009	217	295	146	122	347	388	210	1,812	8,190	1%
Rural	9,095	5,739	2,073	2,242	919	1,382	306	690	826	1,683	24,957	3%
Total	20,709	12,927	5,172	4,632	1,952	2,255	1,153	1,753	1,575	6,741	58,871	7%
Korce												
Urban	96,108	36,602	14,841	5,438	13,691	7,172	7,267	5,914	3,617	25,153	215,804	25%
Rural	67,214	29,914	7,480	4,981	7,893	5,057	3,884	4,605	4,584	12,052	147,663	17%
Total	163,322	66,516	22,321	10,418	21,584	12,229	11,152	10,519	8,201	37,205	363,467	42%
Lezhe												
Urban	18,821	14,610	4,604	3,324	886	2,633	1,659	1,985	538	5,322	54,382	6%
Mix	3,694	2,460	840	493	136	423	226	121	246	460	9,098	1%
Rural	10,762	4,923	1,402	2,181	531	1,630	808	839	468	2,107	25,651	3%
Total	33,278	21,993	6,845	5,999	1,553	4,687	2,693	2,944	1,252	7,888	89,131	10%
Shkoder												
Urban	34,131	26,872	9,535	4,895	3,176	4,371	2,327	3,154	2,134	16,552	107,146	12%
Mix	6,636	6,265	1,528	936	418	864	841	916	587	2,021	21,011	2%
Rural	18,818	17,877	3,970	3,556	1,660	3,225	1,417	1,988	2,303	5,351	60,166	7%
Total	59,585	51,013	15,032	9,386	5,254	8,459	4,585	6,059	5,024	23,924	188,323	22%
Total	335,391	191,799	60,625	37,411	35,274	35,240	25,495	26,704	20,551	92,677	861,167	100%
%	39%	22%	7%	4%	4%	4%	3%	3%	2%	11%	100%	

Source: HII encounter form

²² Others: Chest Pain, Anemia, Acute Lower Back Pain, Depression, Anxiety, Prostate Problems, Headache, Otitis Media, Diarrhea and Vomiting, Fever, Sexually Transmitted Diseases, Menopause.

TABLE 10B: CROSS-COMPARISON OF AVERAGE NUMBER OF PHC SERVICES BY MBP CONDITIONS BY GP, BY UMR AND BY PREFECTURE

MBP	No. of GPs	Hypertension	Respiratory Infection	Diabetes	Asthma COPD	Heart Failure	Angina, Ischemic Heart Disease	Urinary Tract Infection	Dermatology	Arthritis	Other	All MBP Conditions
Berat												
Urban	47	884	480	182	108	102	75	75	62	46	222	2,237
Mix	5	312	302	90	47	43	25	46	39	12	131	1,046
Rural	47	327	325	47	49	41	27	46	50	48	124	1,086
Total	99	591	397	114	77	70	50	60	55	45	171	1,630
Diber												
Urban	18	554	232	160	42	116	49	28	38	30	180	1,429
Mix	5	329	602	43	24	59	29	69	78	42	362	1,638
Rural	42	217	137	49	33	53	22	7	16	20	40	594
Total	65	319	199	80	35	71	30	18	27	24	104	906
Korce												
Urban	70	1,373	523	212	102	78	196	104	84	52	359	3,083
Rural	89	755	336	84	57	56	89	44	52	52	135	1,659
Total	159	1,027	418	140	77	66	136	70	66	52	234	2,286
Lezhe												
Urban	30	627	487	153	88	111	30	55	66	18	177	1,813
Mix	14	264	176	60	30	35	10	16	9	18	33	650
Rural	40	269	123	35	41	55	13	20	21	12	53	641
Total	84	396	262	81	56	71	18	32	35	15	94	1,061
Shkoder												
Urban	46	742	584	207	95	106	69	51	69	46	360	2,329
Mix	16	415	392	95	54	58	26	53	57	37	126	1,313
Rural	63	299	284	63	51	56	26	22	32	37	85	955
Total	125	477	408	120	68	75	42	37	48	40	191	1,507

Source: HIS encounter form

Table 10C shows that Korce handles about 6.5 times the number of these three conditions compared to Diber (252,000 versus 39,000), and 2 times the number of cases in Shkoder (252,000 versus 126,000). Examining the percent distribution of the three conditions within each prefecture, Korce has the highest percent with hypertension at about 65%, while Shkoder has only 47% followed by 53% and 54%, respectively, in the two remaining prefectures. Diabetes varies from only 10% to 13% across the three prefectures; thus there is little relative variation in the percent of prescriptions that condition. [Refer to Table 2A for the relative number of registered populations per prefecture—which explains only a fraction of the above differences.]

TABLE 10C: NUMBER AND PERCENT DISTRIBUTION OF THREE MOST PREVALENCE CONDITIONS BY MBP CONDITION AND PREFECTURE

Prefecture	Number of cases				Percent distribution			
	Hypertension	Diabetes	Respiratory infection	Total	Hypertension	Diabetes	Respiratory infection	Total
Berat	58,496	11,255	39,351	109,102	53.6%	10.3%	36.1%	100%
Diber	20,709	5,172	12,927	38,808	53.4%	13.3%	33.3%	100%
Korce	163,322	22,321	66,516	252,159	64.8%	8.9%	26.4%	100%
Lezhe	33,278	6,845	21,993	62,116	53.6%	11%	35.4%	100%
Shkoder	59,585	15,032	51,032	125,649	47.4%	12%	40.6%	100%

Source: HIS encounter form

COSTS OF PHC SERVICES

The costs of providing PHC services at Health Centers consist of the recurrent costs (personnel costs and operation and maintenance) and of the costs of reimbursing patients for the part of the drug costs covered by HII benefits [indirect (overhead) costs and costs of capital and equipment are not included in the calculations presented here]. The recurrent costs can be divided into those attributable to services provided by GPs and to those provided by nurses/midwives.²³ Table 11 shows the total recurrent costs of PHC services (excluding prescription costs) by UMR Health Center type and prefecture.

Table 12 shows the costs of prescription drugs by Health Center type and prefecture. Table 13 shows the two types of costs combined to give the total costs of PHC services by Health Center type and prefecture.

In the five prefectures, approximately Leke 1.5 billion are spent on recurrent costs (personnel, operations and maintenance). Only 28% is spent in urban Health Centers compared to 72%

in rural and mixed Health Centers. Therefore, the cost per registered population in rural areas is substantially higher than in urban areas. The recurrent cost per population in rural areas is Leke 1,300 compared to only about 860 in urban areas (or 50% more per registered population spent on recurrent costs in rural areas). Since the GPs in rural areas provide services to a small number of patients per day (on average, as recorded in prescription data), it is possible that recurrent costs could be 1) reduced and/or 2) more efficiently used by shifting some GPs with low utilization of service to other areas where there is higher demand. Alternative strategies should be considered for more efficient use of the budget allocated to cover the salaries of GPs (and even of nurses/midwives), among Health Centers with low levels of productivity and performance.

TABLE 11: RECURRENT COST BY UMR AND PREFECTURE (LEKE 000S)

Prefecture	Type of HC			Total
	Urban	Mixed	Rural	
Berat	96,339	14,621	159,960	270,920
Diber	43,924	19,581	214,007	277,512
Korce	129,911	0	245,113	375,024
Lezhe	63,984	40,513	97,949	202,447
Shkoder	90,905	56,750	221,096	368,751
TOTAL	425,062	131,466	938,126	1,494,654
PERCENT	28%	9%	63%	100%

Source: HII for all HCs of the 5 prefectures for 2007

²³ Some unknown level of nurses/midwives activities are provided in support of GP services, while none of the prescription drug costs are attributable to nurses/midwives services.

The share of total recurrent costs in all prefectures is 28% in urban Health Centers (Table 11), while the share of total drug costs in all prefectures is 56% in urban Health Centers are higher in urban areas (Table 12).²⁴ The share of total recurrent costs in all prefectures is 63% in rural Health Centers (Table 11), while the share of total drug costs is only 36% in rural Health Centers (Table 12). For all five prefectures, about Leke 1,500 spent for drugs per registered population. In urban areas, drug costs are approximately Leke 1,000 per registered population. In rural areas the drug costs are about 2.3 times higher, at about Leke 2,300 per registered population. The reason for the large variation in drug costs per registered population, between rural and urban areas, warrants additional analysis as to the possible causes. Nevertheless, the data suggest that the higher cost per registered population in rural areas is, in part, due to a greater use of drugs per inhabitant.²⁵

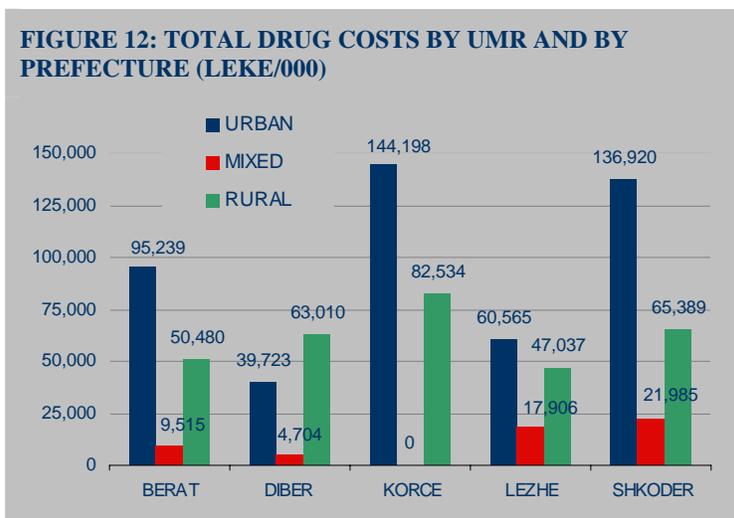


TABLE 12: TOTAL DRUG COSTS BY UMR AND PREFECTURE (LEKE 000S)

Prefecture	Tyre of HC			Total
	Urban	Mixed	Rural	
Berat	95,239	9,515	50,480	155,234
Diber	39,723	4,704	63,010	107,437
Korce	144,198	0	82,534	226,732
Lezhe	60,565	17,906	47,037	125,507
Shkoder	136,920	21,985	65,389	234,634
Total	476,645	54,109	308,450	849,545
Percent:	56%	6%	36%	100%

Source: HII software for the prescriptions

Recurrent and drug costs are compared by UMR type of Health Center (Figure 13). Overall, about two-thirds of total costs are recurrent (64%), but there are major variations by UMR. In rural areas, only 25% of the Health Centers' total costs are for drugs, compared with over twice that share in urban areas, at 53%. This occurs because a larger percent of costs in rural areas is allocated to recurrent (staffing) costs. In urban areas where GPs serve larger patient caseloads, over twice as much goes for drugs (compared to recurrent costs). Because the average urban GP serves more patients (per day), it also appears that urban Health Centers operate more efficiently than rural Health Centers.

²⁴ Although the overall cost of drugs is higher in urban areas, this study will show that the cost of drugs per registered population is 2.3 times higher in rural areas. Thus substantially more is spent on drugs per registered population in rural areas.

²⁵ Figure 15 shows that GP drugs costs per visit between urban and rural areas do not vary substantially; thus the higher cost of drugs in rural areas must be related to other factors (e.g. increased use of the catchment population and/or more visits per Health Center client).

FIGURE 13: COST BY TYPE OF COSTS

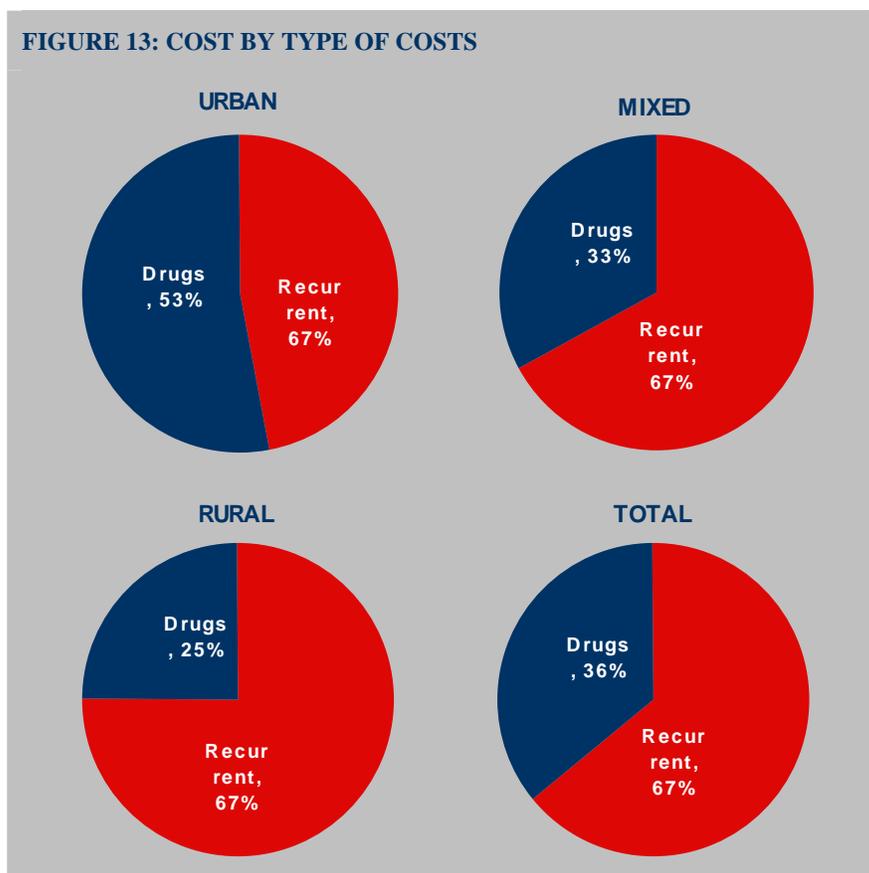


TABLE 13: TOTAL COST BY TYPE OF COST (RECURRENT AND DRUG COST LEKE/000)

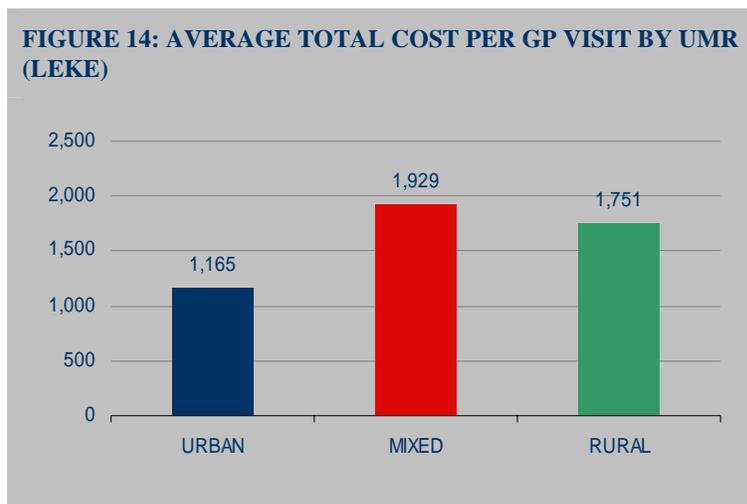
Prefecture	Type of HC									Total		
	Urban			Mixed			Rural					
	Recurrent	Drugs	Total	Recurrent	Drugs	Total	Recurrent	Drugs	Total	Recurrent	Drugs	Total
Berat	96,339	95,239	191,578	14,621	9,515	24,136	159,960	50,480	210,441	270,920	155,234	426,155
Diber	43,924	39,723	83,647	19,581	4,704	24,285	214,007	63,010	277,017	277,512	107,437	384,949
Korce	129,911	144,198	274,109	0	0	0	245,113	82,534	327,647	375,024	226,732	601,756
Lezhe	63,984	60,565	124,550	40,513	17,906	58,419	97,949	47,037	144,986	202,447	125,507	327,955
Shkoder	90,905	136,920	227,824	56,750	32,326	78,735	221,096	65,389	286,484	368,751	234,634	603,385
Total	425,062	476,645	901,707	131,466	64,450	195,916	938,125	308,450	1,246,576	1,494,654	849,545	2,344,199

Source: HII for all HCs of the 5 prefectures for 2007 and HII software for the prescriptions

For purposes of comparing the costs per GP visit and the costs per non-GP visit by UMR and by prefecture, the recurrent cost data in Table 11 are divided by the number of GP visits associated with the total costs by UMR Health Center type and prefecture (shown in Table 9A) to yield recurrent costs per GP visit in Table 16 (nurses/midwives recurrent costs are omitted, and will be considered

separately, and shown in Table 17). Similarly, the drug costs in Table 12 are divided by the number of GP visits to yield total drug costs per GP visit in Table 15. The total costs of PHC services per GP visit is then presented in Table 14 by UMR Health Center type and by prefecture.

Although the average total cost is about Leke 1,400 per GP visit overall, it is lower in urban Health Centers – averaging under Leke 1,200 per visit – than in mixed or rural Health Centers, where it is over Leke 1,900 and Leke 1,750 per visit, respectively. Diber Prefecture has abnormally high averages both for urban and rural Health Centers, at almost Leke 1,800 and Leke 3,700 per GP visit, respectively. Thus the average cost of a rural Health Center visit in Diber is 3.4 times the cost of a visit in rural Korce and over 3 times the cost of a visit in rural Berat. Tables 14 and 16 do not include recurrent costs of nurses/midwives salaries, however, since nurses/midwives also provide services themselves, visits totaling more than twice the number provided by GPs in the five prefectures. Excluding these costs, nurse/midwife costs per visit are the recurrent costs of nurses/midwives divided by their total visits (Table 17). (GP recurrent costs per visit include both GP salaries and benefits and all operating and maintenance costs of the Health Centers.)



Tables 14 and 16 do not include recurrent costs of nurses/midwives salaries, however, since nurses/midwives also provide services themselves, visits totaling more than twice the number provided by GPs in the five prefectures. Excluding these costs, nurse/midwife costs per visit are the recurrent costs of nurses/midwives divided by their total visits (Table 17). (GP recurrent costs per visit include both GP salaries and benefits and all operating and maintenance costs of the Health Centers.)

TABLE 14: AVERAGE TOTAL COST PER GP VISIT BY UMR AND PREFECTURE (LEKE)

Prefecture	Type of HCs			Total
	Urban	Mixed	Rural	
Berat	994	1,735	1,551	1,202
Diber	1,780	973	3,658	2,501
Korce	944		1,088	1,008
Lezhe	1,380	2,325	2,190	1,773
Shkoder	1,454	2,254	2,329	1,808
Total	1,165	1,929	1,751	1,431

Source: HII for all HCs of the 5 prefectures for 2007 and HIS encounter form

Figure 15 shows the average cost of drugs per GP visit which ranges from Leke 809 in rural Health Centers to Leke 900 in mixed areas. The urban-rural costs are not substantially different (Leke 835 and Leke 809 respectively). Upon analyzing drug costs per visit by prefecture, major variations in costs are found. The average drug cost in Diber (Leke 1,276) is twice that of Korce (Leke 595). These variations are even more pronounced in rural Health Centers, Leke 1,672 in Diber and only Leke 486 in Korce (e.g. three times the drug cost per visit in Diber). Drug costs in Diber are about twice the overall level of drug costs in the three prefectures.

FIGURE 15: AVERAGE COST OF DRUGS PER GP VISIT BY UMR (LEKE)

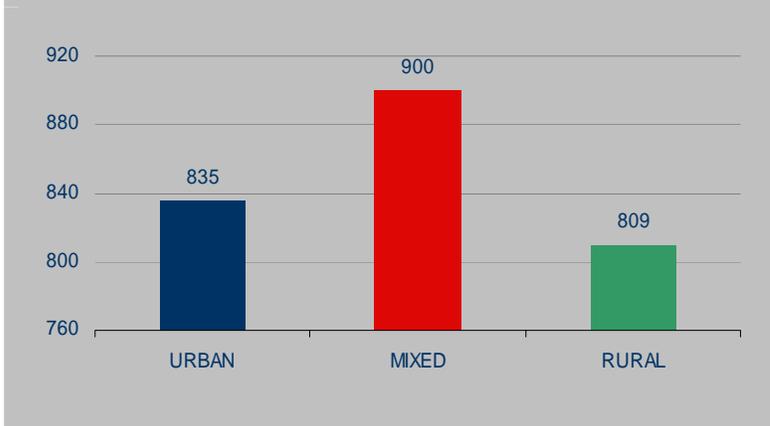


TABLE 15: AVERAGE COST OF DRUGS PER GP VISIT BY UMR AND PREFECTURE (LEKE)

Prefecture	Type of HC			Total
	Urban	Mixed	Rural	
Berat	690	1,096	730	719
Diber	1,169	376	1,672	1,276
Korce	683	-	486	595
Lezhe	940	1,216	1,142	1,043
Shkoder	1,112	910	1,036	1,115
Total	835	900	809	840

Source: HII software for the prescriptions and HIS encounter form

Figure 16 shows the average recurrent cost per visit which varies from Leke 941 in rural Health centers to only Leke 330 (about a third) in urban areas. Thus recurrent staffing and operational costs are three times higher in rural Health Centers compared to urban Health Centers.

FIGURE 16: AVERAGE OF RECURRENT COST PER GP VISIT BY UMR (LEKE)

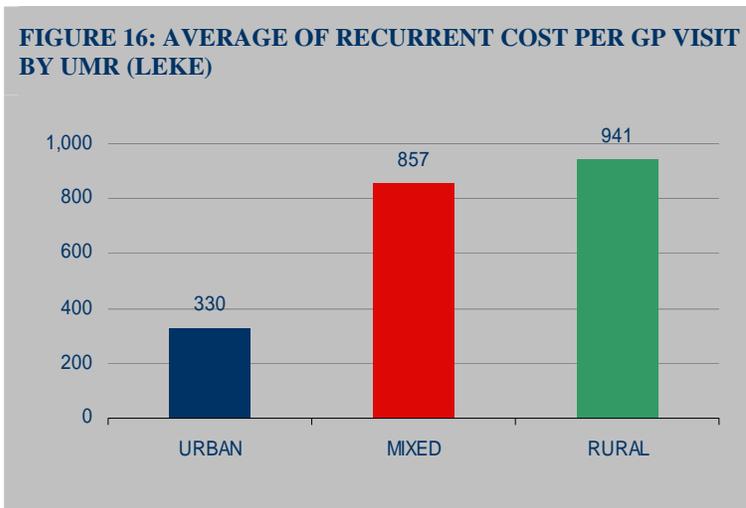


TABLE 16: AVERAGE RECURRENT COST PER GP VISIT BY UMR & PREFECTURE (LEKE)

Prefecture	Type of HC			Total
	Urban	Mixed	Rural	
Berat	304	639	821	483
Diber	610	597	1,987	1,225
Korce	260		602	413
Lezhe	440	1,109	1,048	730
Shkoder	342	916	1,293	693
Total	330	857	941	591

Source: HII for all HCs of the 5 prefectures for 2007 and HIS encounter form

TABLE 17: AVERAGE RECURRENT COST PER NURSE/MIDWIFE VISIT BY UMR AND PREFECTURE (LEKE)

Prefecture	Type of HC			Total
	Urban	Mixed	Rural	
Berat	362	266	279	301
Diber	381	248	320	321
Korce	371	0	262	292
Lezhe	285	343	238	269
Shkoder	406	413	369	383
Total	360	337	296	314

Source: HII for all HCs of the 5 prefectures for 2007 and HIS encounter form

For purposes of comparing the total costs per registered populations (by UMR Health Center type and by prefecture), the data in Table 13 are divided by the numbers of people registered by UMR Health Center type and by prefecture Table 2A. These data are presented in Table 18, which shows that the average total cost per registered person is about Leke 1,800. There is not much significant variation from the overall average by UMR type of Health Center and by prefecture.

FIGURE 18: AVERAGE TOTAL COST OF PHC SERVICES PER REGISTERED POPULATION BY UMR (LEKE)

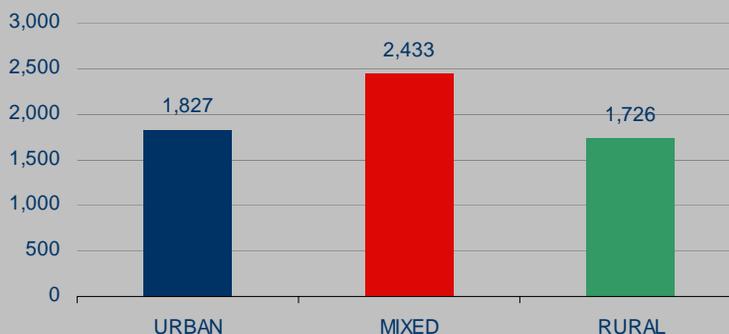


TABLE 18: AVERAGE TOTAL COST OF PHC SERVICES PER REGISTERED POPULATION BY UMR AND PREFECTURE (LEKE)

Prefecture	Type of HC			Total
	Urban	Mixed	Rural	
Berat	1,835	2,481	1,854	1,852
Diber	1,616	2,165	1,943	1,873
Korce	1,807	0	1,675	1,733
Lezhe	1,666	1,939	1,585	1,627
Shkoder	2,054	2,976	1,600	1,848
Total	1,827	2,433	1,726	1,788

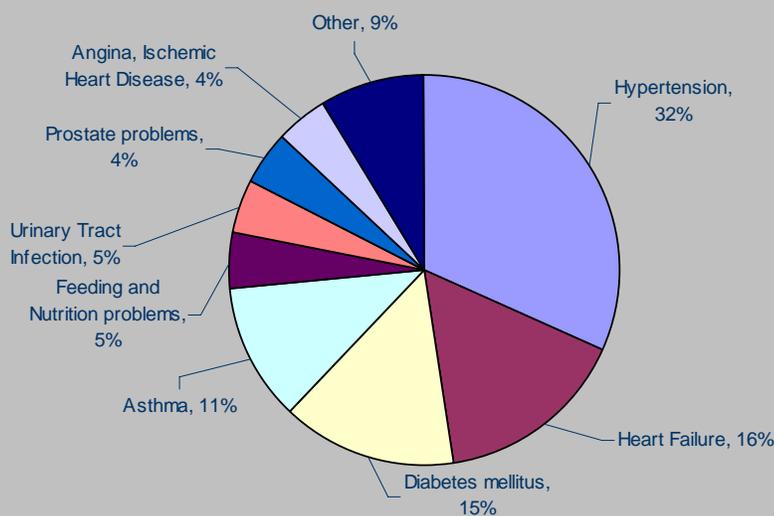
Source: HII for all HCs of the 5 prefectures for 2007

DRUG COSTS BY SPECIFIC DIAGNOSIS AND CONDITION

Looking into a more detailed breakdown of the number of drugs prescribed and their costs by MBP condition, this section shows the total costs of prescriptions according to covered condition under the MBP in Table 19 (by prefecture), and the average prescription costs per condition in Table 21 (by prefecture). Only three conditions – hypertension, health failure, and diabetes—account for 63% of all MBP drug costs. A substantial percentage of drug costs (26%) are spent on non-MBP conditions, indicating the need for a careful reconsideration of MBP conditions and reimbursement procedures.

The cost of hypertension treatment is the highest of all (32% of the total budget pays for MBP prescriptions, seen in Table 19), mostly because it is the condition for which the most prescriptions are written (50% of the total number of prescriptions subsidized by HII, seen in Table 20). However, the second and third most costly, heart failure and diabetes mellitus, are the fourth and third most commonly treated conditions, while the second most commonly treated condition (respiratory infection) does not register among the top eight expensive conditions. The reason – relatively inexpensive drugs indicated for treatment – is implied in Table 21 – showing the average cost per prescription by prefecture (in which respiratory ailments are among “other” treated by drugs which average 62% of the overall average of total costs for total MBP prescriptions. This last table gives an indication of the high variation in the drug costs per prescription provided by GPs. Most notable is the high average cost of treating urinary tract infections in Diber (Leke 7,400 per prescription) and in Lezhe (Leke 5,200 per prescription), while the overall average for that diagnosis is Leke 3,500 – almost four times the overall

FIGURE 19: PERCENT OF TOTAL PRESCRIPTION COST BY MBP CONDITIONS



average. While not shown here, there are also considerable variations across UMR type of Health Centers in average cost per prescription by condition. These large variations deserve more thorough analysis to determine and reduce costs.

For example, it would be worthwhile to understand why the condition which generates about 1% of the total prescriptions (urinary tract infections) [among the lowest ranked of the MBP conditions prescribed for] would rank sixth in terms of total cost and would be the number one condition in terms of cost per prescription (at Leke 3,500 – more than 3.5 times the overall average cost per prescription), followed closely by drugs for prostate problems (2% of prescriptions accounting for 4% of costs, averaging more than 2.5 times the overall average cost per prescription).

TABLE 19: TOTAL PRESCRIPTION COSTS BY MBP AND NON-MBP CONDITIONS BY PREFECTURE

Condition Covered under MBP	TOTALS							
	Berat	Diber	Korce	Lezhe	Shkoder	Total	Percent MBP	Percent Total
Hypertension	34,152	19,548	80,662	15,879	49,505	199,746	32%	
Heart Failure	16,211	14,628	16,504	24,463	26,390	98,196	16%	
Diabetes mellitus	14,952	10,510	23,246	12,745	30,099	91,552	15%	
Asthma	13,074	9,104	14,491	9,528	19,496	71,541	11%	
Feeding and Nutrition problems	6,310	2,832	7,885	256	9,517	29,629	5%	
Urinary Tract Infection	4,105	9,463	2,334	15,376	3,436	28,865	5%	
Prostate problems	6,983	880	4,743	149	13,202	27,101	4%	
Angina, Ischemic Heart Disease	5,284	4,480	8,843	1,993	5,545	27,079	4%	
Other	12,501	8,000	11,913	1,666	15,264	55,154	9%	
TOTAL MBP Conditions	113,572	79,446	170,620	2,166	172,453	628,863	100%	74%
Percent MBP Conditions	18%	13%	27%	366	27%	100%		26%
Subtotal Non-MBP Conditions	41,622	27,992	5,611	1,294	62,181	220,682		
TOTAL All CONDITIONS	155,194	107,437	176,232	210	234,634	849,545		
Percent All Conditions	18%	13%	21%	367	28%	100%		100%

Source: HII software for the prescriptions

FIGURE 20: NUMBER OF PRESCRIPTIONS BY MBP CONDITIONS BY PREFECTURE

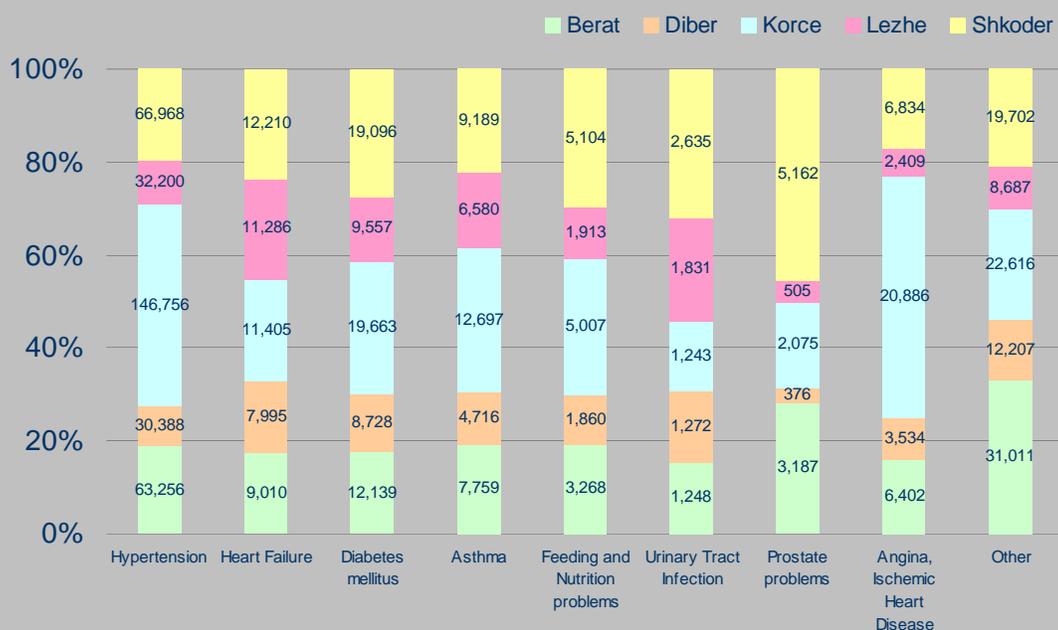


TABLE 20: TOTAL NUMBER OF PRESCRIPTIONS BY MBP CONDITIONS BY PREFECTURE

Condition Covered under MBP	TOTALS					TOTAL	Percent MBP
	Berat	Diber	Korce	Lezhe	Shkoder		
Hypertension	63,256	30,388	146,756	32,200	66,968	339,569	50%
Heart Failure	9,010	7,995	11,405	11,286	12,210	51,907	8%
Diabetes mellitus	12,139	8,728	19,663	9,557	19,096	69,182	10%
Asthma	7,759	4,716	12,697	6,580	9,189	40,940	6%
Feeding and Nutrition problems	3,268	1,860	5,007	1,913	5,104	17,151	3%
Urinary Tract Infection	1,248	1,272	1,243	1,831	2,635	8,229	1%
Prostate problems	3,187	376	2,075	505	5,162	11,305	2%
Angina, Ischemic Heart Disease	6,402	3,534	20,886	2,409	6,834	40,065	6%
Other	31,011	12,207	22,616	8,687	19,702	94,224	14%
TOTAL MBP Conditions	137,279	71,076	242,348	74,967	146,900	672,571	100%
Percent MBP Conditions	20%	11%	36%	11%	22%	100%	

Source: HII data for prescriptions

FIGURE 21: PERCENT OF AVERAGE COST OF PRESCRIPTIONS BY MBPAS PERCENTAGE OF OVERALL AVERAGE

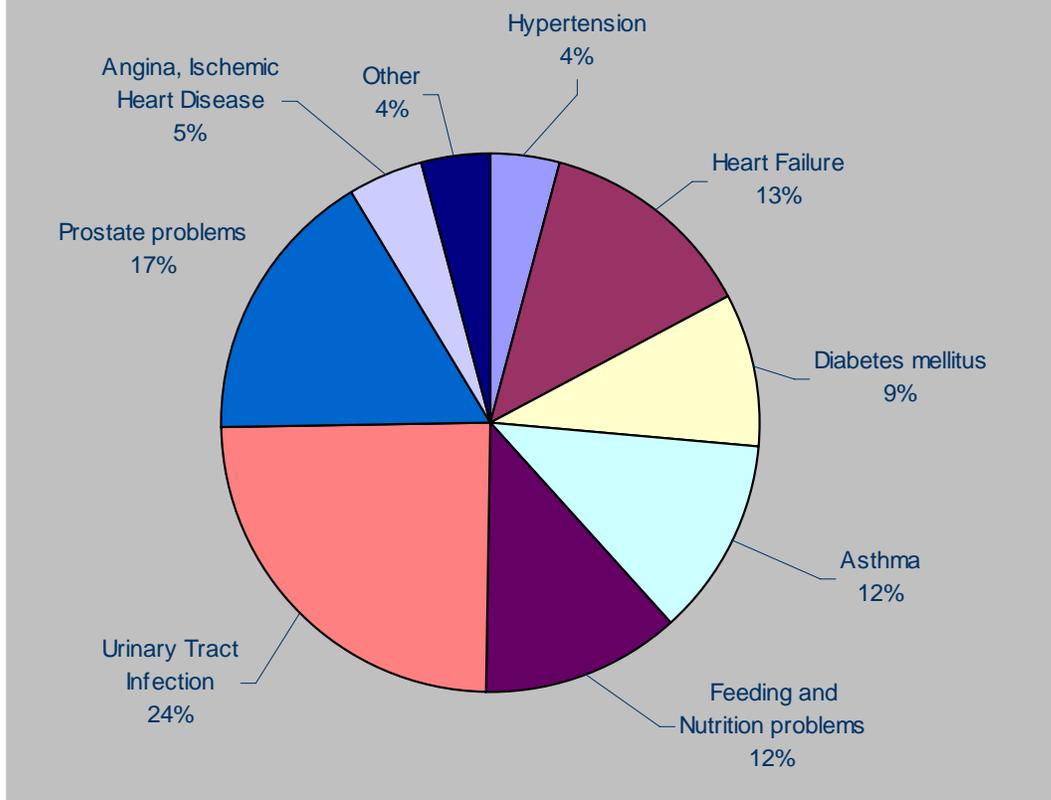


TABLE 21: AVERAGE COST OF PRESCRIPTIONS BY MBP CONDITIONS BY PREFECTURE (LEKE)

Condition Covered under MBP	TOTALS						Ratio: cost of condition over average cost all MBPs
	Berat	Diber	Korce	Lezhe	Shkoder	TOTAL	
Hypertension	540	643	550	493	739	588	0.63
Heart Failure	1,799	1,830	1,447	2,168	2,161	1,892	2.0
Diabetes mellitus	1,232	1,204	1,182	1,334	1,576	1,323	1.4
Asthma	1,685	1,931	1,141	2,337	2,122	1,747	1.9
Feeding and Nutrition problems	1,931	1,522	1,575	1,613	1,865	1,728	1.9
Urinary Tract Infection	3,290	7,440	1,877	5,205	1,304	3,508	3.8
Prostate problems	2,191	2,341	2,285	2,562	2,558	2,397	2.6
Angina, Ischemic Heart Disease	825	1,268	423	1,215	811	676	0.7
Other	403	655	527	860	775	585	0.6
Average Cost of MBP Conditions	827	1,118	704	1,237	1,174	935	

Source: HII data for prescriptions

ISSUES FOR CONSIDERATION

Based on the cost analysis process and findings, a number of health reform recommendations evolved that should be further analyzed and considered by the HII and MoH as a means of improving the performance, effectiveness, and efficiency of PHC delivery in Albania. Some of the following recommendations derive directly from the findings in this report, while other recommendations came from the process of analyzing data from HII and the patient encounter form.

Health information system (HIS)

The patient encounter form can be modified to include the prescription of drugs, based on the diagnosis. The encounter form would also have a tear-off sheet for presentation at the pharmacy (to obtain the prescribed drug(s)). By including both diagnosis and prescription on the same form, HII and the MoH can generate reports at the Health Center, prefecture, and central levels to check compliance with Clinical Practice Guidelines (CPG) and the HII's drug list. Thus, prefecture-level managers and Health Center directors could access and correct non-compliance with diagnostic and drug prescription guidelines. The Health Information reports would include the number of cases by conditions that do not comply with the CPG (as per the drug list), as well as the non-complying Health Center and the provider. These data could also be used during Health Center supervision visits to improve the proper prescription of drugs.

The data would also provide information on the prescription of more expensive drugs, when a lower cost alternative is also available. This would identify both GPs and specialists that are unnecessarily prescribing overly expensive drugs located in the same drug group (as per the drug list).

A significant proportion of clients are not recorded in the Health Center register nor in the patient encounter form, while making informal payments to Health Center staff. A major effort is needed to make sure that all patients receiving Health Center services are recorded in order that the full scope of PHC services provided are measured, monitored/supervised, and included in planning and budgetary allocations. One option is to legitimize the retention of client-generated income by Health Centers, and their staff (as part of their income). Since there would be no penalty for recording clients that pay for services then, the delivery of PHC services to these patients could be entered into service data. Moreover, the accounting of income from patients generating Health Center income would permit better planning and allocation of resources.

Estimates of the populations (registered) covered by Health Centers remain incomplete. For the health reform effort to accurately measure the needs of the catchment populations of Health Centers and measure coverage (a bonus indicator), periodic registration is required.²⁶ Since the catchment data were collected by Health Center staff, we also suggest that random samples be drawn from Health Centers' records, and the data be cross-checked to ensure completeness and reliability.

Provision of PHC services

Two conditions – hypertension and respiratory infection – account for 61% of PHC services in Health Centers, while diabetes accounts for another 7%. Thus, almost 2 out of 3 patient visits are for three chronic conditions. That some 60% of MBP visits are related to chronic care is typical of an older population. Moreover, chronic care accounts for over 80% of drug costs, leaving less than 20% for accounted for by other conditions. We recommend that the profile of patients receiving PHC services be compared with those of other Eastern European and Balkan countries to determine if actual services offered in Albania reflect the expected health needs of the population. We suspect that many patients requiring non-chronic care are bypassing Health Centers, even though the Health Center is almost always the closest to their home.

Moreover, there is a need to examine the volume of PHC services that are provided in hospitals located in urban areas, since a large proportion of hospital care is ambulatory and involves primary

²⁶ Projections based on census data will not provide accurate estimates of at-risk populations.

care. The MoH and the HII need to further improve PHC services in Health Centers and increase the use of these facilities.

Human resources

Based on reported data in this study, the productivity (number of client visits provided per day) of nurses/midwives and of GPs is low in many rural areas. This is reflected in the overall mean of visits per day across UMR types of Health Centers, as well as in the lower median of visits in the five prefectures. Rural GPs serve an average of only 4.4 patients per day, while rural nurses/midwives attend 3.4 patients per day.²⁷ The implication is that increased productivity of GPs and nurses/midwives – particularly the lower quartiles – is required to improve the cost-effectiveness and quality of PHC services.

Our review of the HIS also shows that a substantial proportion of GPs do not provide patient visits on every contracted work day. For example, they may only report patient visits for one to three or four days a week while receiving a salary for full-time work. A complete check of attendance in Health Centers, by both nurses/midwives and GPs, is warranted, accompanied with salary payment based on actual attendance and services provided. If a GP is not reporting patient visits for two or more days, one should probably assume that the GP is not working in the Health Center or the patient caseload is very low. In either case, HII managers need to investigate and determine if changes in health personnel are justified (e.g. replacement or reduction). The contracted number of work days per GP and per nurse/midwife needs to be 1) defined in the Health Center contract and operational regulations, as well as the job description of GPs and nurses/midwives; 2) reported to the Health Center director and prefecture-level managers and supervisors; and 3) followed up during prefecture-level management meetings, as well as HII supervisory visits to Health Centers. Moreover, sanctions outlined in the Common Regulations should be applied.

Health Center Infrastructure

Given the low levels of service in some of the rural Health Centers, the following question needs to be asked: Are scarce resources (human and infrastructure resources) being effectively used in some rural areas, given the increased needs for both PHC and hospital care in other areas?

Further investigation by central and prefecture level managers

There are a number of findings that need additional follow-up and investigations by central and prefecture-level managers. The findings of this cost study have identified some potential problems that need additional consideration and in-depth analysis.

Why do substantial variations in the disease profile exist among prefectures and UMR types of service? Are these differences the result of access to different types of PHC services (both preventive and acute)? Do the differences result from varied access to specialists, and diagnostic and other support services?

Why does the same condition show differences in drug costs among prefectures and UMR types of service? For example, why does a GP visit in rural Diber cost almost 4 times that of a GP visit in urban Korce? Why is the average cost of drugs per visit in rural Diber 3.4 times the average cost in rural Korce? Why does the average cost of drugs for the same condition (e.g. urinary tract infection) vary by a factor of about six times among the five prefectures?

We expect that HII staff (both central and prefecture levels) will review the cost analysis data, and identify questions and issues that require additional investigation and problem solving. Moreover the analysis of utilization and costs should be done periodically, using existing service data (from patient encounters, diagnoses, prescriptions, and drug reimbursements).

²⁷ The scope of nurse/midwife work also includes other activities in the community with groups and health promotion, as well as administrative support.