

Costs and Utilization of Primary Health Care Services in Albania: A National Perspective on a Facility-level Analysis

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- ▲ *Delivery of quality services by health workers.*
- ▲ *Availability and appropriate use of health commodities.*

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Abstract

Since 1989, the number of staffed health centers and health posts in Albania has declined significantly – by roughly 40 percent – while average utilization of them has declined even more rapidly – by about 60 percent, from 3.9 visits per person yearly to 1.6 visits per person yearly in 2002. During that period, the total cost of providing the declining level of primary health care (PHC) services has gone up substantially, so that, with much lower utilization, the overall average cost of a PHC visit to a health center or a health post has risen considerably. The clear implication is that the efficiency and productivity with which PHC services are being delivered are much lower than they used to be. This technical report provides and analyzes the evidence that supports this inference, and suggests what steps might be taken to improve productivity and what impact they might have. Two different perspectives are presented. The first part takes a broad perspective on resources spent nationwide on primary health care – including important measures of overall costs and productivity, and focusing on the expenditures by the Health Insurance Institute. The second part focuses detailed analyses on measures of costs and productivity at four specific facilities – the pilot sites of the PHR*plus* Project in Berat and Kuçovë. The broader perspective of the first part provides the appropriate context within which to assess the results shown in the second part. Together, the two parts show how financial analysis of cost and utilization can be developed and used to inform policymaking. The data support the following conclusions: that productivity in health centers and health posts located in urban areas is significantly higher than that in such facilities located in rural areas; that the average cost of a PHC visit to a health center or a health post (Lek 500 in 2002) is higher than a visit to a polyclinic (which includes specialty visits) (Lek 310 in 2002); that overstaffing at health centers and health posts accompanies underutilization and results in very low average patient contact times per physician; but that there is potential for improvements in quality and in utilization if (some of the) savings from reductions in staffing were to be partly used to improve availability of supplies and equipment – and that these improvements would improve productivity by lowering the cost per patient visit. This paper presents a hypothetical illustration of such improved productivity from postulated changes in staffing and operations, and concludes with recommendations and with observations about the requirements for, and the implications of, designing and implementing alternative PHC financing and management policies that are suggested.

Table of Contents

Acronyms	xi
Acknowledgments	xiii
Executive Summary	xv
1. Background and Introduction	1
2. Costs and Utilization of PHC Services	5
2.1 Compensation of PHC Physicians	5
2.2 Productivity and Health Centers/Posts	10
2.2.1 Staffing Levels and Use Rates: Visits Per Person, Per Facility, Per GP	10
2.2.2 Staffing Costs and Utilization Rates	12
2.3 HII Spending: GP Salaries and Reimbursement for Essential Drugs	13
3. Costs and Utilization of PHC Facilities: A Detailed Analysis of Four Facilities in Berat and Kuçove	17
3.1.1 The Mathematical Derivation and Meaning of the Unit Cost of Service Production .	17
3.2 Defining Categories of Costs and Utilization	18
3.2.1 Capital versus Recurrent Costs	18
3.2.2 Direct Costs versus Indirect Costs	19
3.2.3 Fixed versus Variable Costs	19
3.2.4 Average versus Marginal Costs	20
3.2.5 Costs of Optimal Production versus Costs of Suboptimal Production	20
3.2.6 Categories of Utilization: Attributing Use to Particular Costs	21
3.3 Estimates of Total and Unit Costs of PHC Services	21
3.3.1 Total Annual Costs of PHR <i>plus</i> Pilot Health Centers	21
3.3.2 Average Total Annual Costs and Staff Use of PHR <i>plus</i> Pilot Health Centers	22
3.3.3 Using Average Cost and Use Data for Analysis	23
3.3.3.1 Reducing Average Total Costs by Reducing Excessive Staffing	24
3.3.3.2 Reducing Average Total Costs Further by Applying Some of Savings towards the Purchase of Needed Supplies to Induce Increased Utilization (e.g., by 25 percent)	24
3.3.3.3 Summary of this Illustration of Improved Efficiency	25
3.3.4 Further Use of Average Cost and Use Data for Policy Analysis: Alternative Provider Payments	26
4. Conclusions and Recommendations	27

4.1	The National Picture	27
4.2	Insights from Analysis of Facility-specific Data.....	28
4.2.1	Financing Added Supplies and Improved Management at the Health Centers	29
4.2.2	Financing the Added Costs of Delivering a More Complete Benefits Package.....	30
4.2.3	Steps being Taken, Under Consideration, and/or Recommended	31
	Annex A: Averaging Aggregated Costs and Units of Service in Albania	33
	Annex B: Methods Used in Defining, Gathering, and Processing Cost Data	35
	Annex C: Health System Data for PHR <i>plus</i> Site Areas.....	39
	Annex D: List of Services for PHC Facilities.....	41
	Annex E: List of Equipment and Supplies for PHC Facilities.....	47
	Annex F: Patient Encounter Forms	51
	Annex G: Bibliography	59

List of Tables

Table 1:	Normal and Allowable Maximum Caseload Limits for GPs.....	6
Table 2:	Staffing Levels for 1999 and 2003.....	10
Table 3:	Number of Visits and Visits per Facility per for 2001, 2002, and 1999	11
Table 4:	Number of Visits per Person, per Facility, per MD, by Type of Facility	12
Table 5:	Number of Visits per Facility, 2002.....	12
Table 6:	Operating Costs of Polyclinics, PHC Sites, and Public Health, 2002-2004	13
Table 7:	Costs per Visit for 2002 and 1998	13
Table 8:	Health Insurance Institute Budget for 2001-2003 (Lek million)	14
Table 9:	Total Costs of Four Pilot Health Centers in Lek (000,000s) and in Percent.....	22
Table 10:	Average Costs of Pilot Health Centers: Total Staffing, and Staffing Capacity Actually Used	22
Table 11:	Illustrating Cost Savings Possible from Reducing Medical Staff by 33 Percent	24
Table 12:	Illustrating Additional Average Cost Savings Possible from Using Some of Savings from Staff Reductions towards Purchase of Medical Supplies.....	25
Table 13:	Summary Illustration of Improved Efficiency from Financing Reforms (an example of costs and utilization with possible changes at Llukan Prifti)	25

Table 14: Outpatient Yearly Visits per Facility, Per GP, and Per Person, and Average Costs per Visit by Facility (2002)..... 27

Acronyms

CPG	Clinical Practice Guidelines
DPH	Directorate of Public Health
GP	General Practitioner
HC	Health Center
HII	Health Insurance Institute
HP	Health Post
MOH	Ministry of Health
MOF	Ministry of Finance
PHC	Primary Health Care
PHR_{plus}	Partners for Health Reform _{plus}
RDHI	Regional Directorate of Health Insurance
SII	Social Insurance Institute
TRHA	Tirana Regional Health Authority
TUH	Tirana University Hospital
USAID	U.S. Agency for International Development

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Executive Summary

Since 1989, the number of staffed health centers and health posts in Albania has declined significantly by roughly 40 percent, while average utilization of them has declined even more rapidly – by about 60 percent, from 3.9 visits per person yearly to 1.6 visits per person yearly in 2002. These declines have occurred in spite of the fact that the government (with financing through the Health Insurance Institute) has succeeded, since 1995, in placing more than 1,500 general practitioners (GPs) in health centers and health posts dispersed throughout the country and in making available outpatient prescription drugs to most of the population at highly subsidized prices.

Because of increases in numbers of staff deployed to primary health care (PHC) facilities and in average compensation to staff during this period, the total cost of providing the declining level of PHC services has gone up substantially. On average, however, the costs per visit and per facility, have gone up much more – because the denominators (i.e., visits, facilities) have declined while the numerators in these rates (i.e., costs) have risen. The increased staffing costs have also been supplemented by increases in the subsidized costs of prescription drugs. Taken together, the overall average costs of a PHC visit to a health center or a health post has climbed considerably as the utilization rate has dropped. The clear implication is that the efficiency and productivity with which PHC services are being delivered is now quite low. This report provides evidence to support this inference, and suggests what steps might be taken to improve productivity and what impact they might have.

The task of gathering and analyzing PHC cost and utilization data is part of a broader effort by the USAID-funded project Partners for Health Reform*plus* (PHR*plus*) in Albania to produce evidence for policymakers in the area of health finance. The project has produced a technical report on government financing and organization of PHC (Fairbank and Gaumer 2003) and is regularly producing utilization data from the four pilot site facilities. Additional reports are being prepared concerning the degree to which of informal user payments are made in the Albanian health system and the policy implications of the findings (Vian 2004 and Hotchkiss et al., forthcoming).

This paper presents a two-part analysis of costs and productivity of health centers and health posts in Albania. The first part takes a broad perspective on resources spent nationwide on primary health care – including important measures of overall costs and productivity. Its focus is on the expenditures by the Health Insurance Institute on the services of general practitioners and on reimbursements for prescription drugs. The second part focuses detailed analyses on measures of costs and productivity at four specific facilities – the PHR*plus* project sites in Berat and Kuçovë. The broader perspective of the first part provides the appropriate context within which to assess the results shown in the second part. A summary of the issues involved in interpreting the results, and a summary of the results and their implications, are presented in the conclusion.

The overall objectives of the paper are thus:

- ▲ To analyze the total and average costs of the delivery of PHC services in Albania, focusing on measures of productivity, using both national data as well as specific cost and use data from the four PHR*plus* project sites; and

- ▲ To describe how such cost analyses in general, both for all PHC sites in the aggregate (Part One) and for specific sites (Part Two), can be developed and used to inform policy, and how caution must be used in interpreting the results.

This paper is thus designed to show how to measure the rate at which resources are used when PHC services are produced and consumed in Albania, to discuss some of the issues raised in the process of such measurement, and to establish, at least in part, a basis or a benchmark to use in any revision of current policies on user fees.

The following conclusions are derived from the data and analyses made in this paper:¹

- ▲ Productivity in health centers and health posts located in urban areas is significantly higher than that in such facilities located in rural areas. Ministry of Health data show that urban facilities produced an average of 36 visits per facility per day in 2001, while rural facilities produced an average of three visits per facility per day that year. Meanwhile, polyclinics processed 178 visits per facility per day.
- ▲ The productivity in health posts is significantly lower than the productivity in health centers. Data from 2001 indicate that the yearly visits per health center were 3,386 while the yearly visits per health post were 568 (six times smaller). Meanwhile, the number of health centers throughout Albania was 571 (with two-thirds of them located in rural areas), while the number of health posts was 1,375 (all of them located in rural areas).
- ▲ There are thus six times as many PHC facilities in rural areas, while just under half of all GPs are posted in rural areas. Because the rural GPs receive incentive compensation that rewards them with between 150 percent and 350 percent of the level of compensation received by urban GPs, it is quite expensive to keep rural facilities operating – making the average cost of a visit very much higher than that in an urban facility. In 2002, the average cost per visit at (urban) polyclinics was Lek 310 while the average cost per visit at health centers and health posts was Lek 500.
- ▲ Data collected from PHR*plus* project sites during the period July 2002 through June 2003 revealed these inferred differences between urban and rural facilities. Total costs at the two urban clinics in Berat and Kucove averaged about Lek 240 per visit, while the two rural clinics averaged Lek 814 and Lek 163 per visit (with similar workloads, the former had a considerably larger staff than the latter).
- ▲ The total costs of all facilities are heavily dominated by staffing costs, which are much higher than they need to be. Total staff time devoted to patient care as a percent of the total staff time available during an average workday was generally very low – three of the facilities recording 12 percent or lower as the rate of patient contact by all staff. Patient contact by physicians ranged from 22 percent to 37 percent of total physician time available.² Budgets for supplies and consumables were very low and unpredictable in their availability.
- ▲ An illustrative analysis was performed to gauge the effect on total and average costs of reducing the number of staff at one PHR*plus* Project site. At that (urban) site, more than Lek

¹ Unless specifically noted, none of the cost data referred to in this paper includes costs of prescription drugs.

² Data on patient contact time are from the period July 2002 through June 2003. During the following year, average patient contact times more than doubled at the four sites due to project intervention, and to interventions by the HII, such as the medical chart, leading to increased time to fill out the chart.

600,000 could be saved annually by reducing the number of GPs from six to four, with the remaining four physicians still able to handle the existing workload with about one-third of their available time devoted to patient contact. Cost per visit would then decline from Lek 257 to Lek 219, assuming no change in utilization. If utilization could then be increased by 25 percent by investing 25 percent of the savings, say, to purchase needed supplies, it was estimated that cost per visit could be reduced even further – in our example, to Lek 183. Improvements in service quality that require increased time spent per patient, e.g., from implementation of clinical practice guidelines, would increase GPs' total patient contact time, and, possibly, increase utilization still further. Clearly, a fully productive staff with adequate supplies (in an urban area) might well be able to produce PHC services for even less than Lek 183 per visit (depending upon the increase in utilization). (These illustrations did not seek to reduce nursing staff, which is also, at present, too large for the workloads at most facilities.)

- ▲ Interpretation of these data and analytical conclusions need to be made with some caution. First, these cost data represent the use of resources in low-productivity, sub-optimal combinations. Extrapolating them for use in estimating the total and average costs of a high-productivity, more optimal resource combination is subject to possible error. Second, the productivity of rural facilities will always be lower than of urban facilities, no matter how service delivery is organized. There is ample opportunity, however, to experiment with alternatives that might improve the very low levels of productivity that now exist in rural health centers.

1. Background and Introduction

The inevitable presence of resource constraints in the health sector, and the constant demands from other sectors for alternative uses, makes it critical that managers and planners of government health services keep close track of what it costs to produce what level of health care services. This need to relate the volume of services produced by the health system to the resources expended to produce them is based on a fundamental imperative: *deliver the most services (at acceptable quality) at the least cost*. The number of services produced in relation to their costs will give some indication of the efficiency of production, both for individual facilities and for the system as a whole.

Furthermore, in order to prevent unnecessary use of services and to provide some services (at least to some segments of the population) at higher rates of subsidies than others, this need extends to other important policy imperatives: *recover some costs overall, but recover less of the costs for certain services and for certain patients in order to achieve desired public policy goals ensuring equitable and effective use of health resources*.³ Good health planning and health management cannot be performed without the availability of cost and utilization data, nor without associated analyses relating the two. These data, and subsequent analyses, help policymakers to know how efficient and effective their health care delivery system is, as compared to how efficient and effective it could be.

The task of gathering and analyzing such cost and utilization data is part of a broader effort by the U.S. Agency for International Development (USAID)-funded project Partners for Health Reformplus (PHRplus)/Albania to produce evidence for policy makers in the area of health finance. The project has produced a technical report on government financing and organization of primary health care (PHC) (Fairbank and Gaumer 2003) and is regularly producing utilization data from the four pilot site facilities. A separate working paper (PHRplus/Albania 2003) has analyzed the order of magnitude of household out-of-pocket expenditures in 2001 on health care, including spending on outpatient services, hospital services, dental care, pharmaceuticals, and insurance premiums.

This paper presents a two-part analysis of costs and productivity of health centers and health posts in Albania. The first part (Section 2) takes a broad perspective on resources spent nationwide on primary health care – including important measures of costs and productivity. Its focus is on the expenditures by the Health Insurance Institute (HII) on the services of general practitioners and on reimbursements for prescription drugs. The second part (Section 3) focuses detailed analyses on measures of costs and productivity at four specific facilities – the PHRplus project sites in Berat and Kuçovë. The broader perspective of Part One provides the appropriate context within which to assess the results shown in Part Two. A summary of the issues involved in interpreting the results, and a summary of the results and their implications, are presented in the conclusion in Section 4.

The overall objectives of this technical report are thus:

³ By these criteria (as applied to a government-sponsored health services system), fees would be waived for the poor and there would be fee exemptions for the treatment of certain communicable diseases (e.g., tuberculosis) so that no one would face any financial barrier to getting treatment for them. Preventive care services might also be provided free of charge by these criteria.

- ▲ To analyze the total and average costs of the delivery of PHC services in Albania, focusing on measures of productivity, using both national data as well as specific cost and use data from the four *PHRplus* project sites; and
- ▲ To describe how such cost analyses in general, both for all PHC sites in the aggregate (Part One) and for specific sites (Part Two), can be developed and used to inform policy, and how caution must be used in interpreting the results.

This paper is thus designed to show how to measure the rate at which resources are used when primary health care services are produced and consumed in Albania, to discuss some of the issues raised in the process of such measurement, and to establish, at least in part, a basis for revising current policies on user fees.⁴

Part One, which gives the macro-level analysis, has three sections: The first describes the system that the HII uses to determine compensation of general practitioners. The second describes and analyzes data on productivity of health centers and health posts using rates of staffing and use. The third describes data on HII's spending on general practitioner (GP) salaries and on drug reimbursements.

Part Two, which gives a micro-level analysis, has four sections: The first discusses the mathematics of calculating the unit cost of service production. The second describes the various concepts and categories of cost and their implications for measuring them in relation to output of services. The third describes the methods used in gathering data on PHC costs in Albania and in calculating pertinent cost measures using those data at each of the four *PHRplus* project sites in Berat and Kuçove, presenting estimates of those measures for the first 12 months of operations. Finally, the fourth section addresses the question of what would be the cost of optimizing production of PHC services – that is, the cost of efficiently producing those PHC services that ought to be provided at the *PHRplus* sites. Since the answer to such a question depends upon a policy decision about the optimal way to organize the delivery of such PHC services (to reduce the clear inefficiencies in the current organization of facilities), it is not possible to give an unqualified answer. However, a hypothetical illustration is given in this last section to show how financing and organization reform could improve efficiency of producing services at PHC sites. This illustration presents the total cost (and average cost) implications of different alternative levels of care in one health center in the municipality of Berat (Llukan Prifti), and discusses the process and use of cost analyses using data on cost and use aggregated across many delivery sites as providing information and analysis relevant for policy planning and development.

Service cost calculations have long been needed in Albania to support the process of planning and budgeting for health care delivery, and for designing and implementing the still anticipated process of packaging and “selling” the health services of the Ministry of Health (MOH) to the primary insurer, financier, and purchaser of PHC services – the Health Insurance Institute. The MOH's budgeting office has attempted to make such calculations, and has used such calculations for the establishment of user fees where they apply (for the uninsured and for certain services).

⁴ Costs of production are by no means the only guideline for determining user fees. The *PHRplus* paper on the “Policy Implications of Informal Payments” (Vian et al. 2004) addresses the range of issues that need to be considered, included those raised by the fact that patients already pay user fees, albeit on an informal basis, when there is no formal requirement that they pay.

The concluding section, after summarizing the paper's analytical results, describes how cost and utilization data that are presented can help to plan a possible optimal reorganization of services – one that could be supported by a simple system of planning and budgeting at the regional level and below.

2. Costs and Utilization of PHC Services

This first part (the macro-level analysis) presents and analyzes data on the costs and utilization of primary health care services⁵ in Albania from a national perspective, focusing predominantly on data from the Health Insurance Institute and the Ministry of Health. The first section describes the formula by which the HII determines the compensation of almost 1,600 individual general practitioners with whom it contracts to deliver PHC services. The second section presents data on the staffing and utilization patterns experienced in about 2,000 health centers and health posts, with reference to similar data for other outpatient (specialist) services available in the 50 polyclinics. The third section addresses issues of operating costs and the relative importance of the HII's expenditures on essential drugs in comparison to its expenditures on GP compensation and other items.

2.1 Compensation of PHC Physicians

Payments made by the HII can only be made to reimburse *some* of the staff costs (salaries of PHC physicians; nonphysician staff salaries are paid by the MOH) of providing primary health care services and *most* of the costs of basic pharmaceuticals provided to HII beneficiaries (coinsurance payments for drugs average about 25 percent). When the HII started in July 1995, it paid the salaries of GPs based on a system of points – points that were calculated based on caseload and location, for the most part. Since then, the system has been revised and redesigned in order to increase incentives to GPs, focusing especially on increasing monetary rewards to those serving in rural areas. The changes were made so that the exodus of doctors from rural and remote areas, which had begun in the early 1990s, would stop.

Historically (prior to the existence of the HII), GPs were accountable to, paid by, and supervised/managed by the MOH, as represented by the District Public Health Office. Since 1995, they have individual contractual relationships with the Regional Directorate of Health Insurance (RDHI), a local administrative branch of the HII, which covers remuneration and additional compensation.

While GPs are now paid by, and contracted to, the HII, however, the Ministry of Health continues to have some control over their assignment and supervision. The names of GPs to be contracted by the HII for providing primary health care services are proposed by the respective (District) Directorate of Public Health (hereinafter referred to as DPH) that represents the MOH.⁶ They are then appointed by RDHIs. According to the regulations,⁷ the DPH provides the RDHI with a list of GPs who are seeking jobs two days before the Appointment Committee gathers. The deputy director of the DPH is a panel member of the committee.⁸ Thus, in brief, the MOH proposes GPs and

⁵ The analysis covers polyclinics as well as health centers and health posts. While there are PHC physicians posted in polyclinics, most of the physicians in polyclinics are specialists.

⁶ According to Decision No. 84 dated 13.02.2003 of the Council of Ministers, point 10.

⁷ According to HII Decision No. 7 dated 13.05.2003, "On Appointing General Practitioner and Family Doctor to Provide Primary Health Care Service," point 9.

⁸ *Ibid.*, point 10.

participates in the appointment decision-making process, while the HII pays GPs. Payment is according to individual contracts drawn up to reflect the compensation rules that apply (as described above). The first compensation system for GPs set by the HII⁹ in 1995 introduced the definitions of a GP's normal caseload and the GP's allowable maximum limits by type of GP (Table 1).

Table 1: Normal and Allowable Maximum Caseload Limits for GPs

No	GP Categories	Normal Caseload (in number of people)	Allowable Maximum Limit (in number of people)
1	GPs for adults in urban areas	2,000	3,000
2	GPs for "0-14 years" age-group in urban areas	1,000	1,500
3	GPs for all age-groups in urban areas	2,000	3,000
4	GP and head of health center in urban areas	1,400	2,100
5	GP for "0-14 years" age-group and head of health center in urban areas	700	1,050
6	GPs for all age-groups and head of health center in urban areas	1,400	2,100
7	GPs in rural areas	1,700	2,600
8	GP and head of health center in rural areas	1,700	2,600

Source: Health Insurance Institute, Albania

The payments received by each GP were based partly on these caseload limits and partly on the location of the GP's workplace in relation to his or her home. Two other components, a basic payment for all GPs and a supplement for GPs in positions of responsibility, were also part of the compensation formula. This formula is applied yearly by the HII's RDHIs, in drawing up individual contracts to covered GPs' salaries and other expenditures as specified in the HII's Budget Regulation.¹⁰ To this end, a Service Agreement is made annually between each GP and the respective RDHI. The one-year agreement describes the duties and responsibilities of both the GP and the RDHI, and outlines the GP's rights, sanctions, and complaint procedures as well as the period of performance. It also contains a whole section that details the GPs monthly compensation. While there have been changes in the parameters of the basic payments to GPs since 1995, there have always been four main components by which the HII calculates GP compensation. Below is a description of the current components, which incorporate the changes that were instituted in September 2003.¹¹

⁹ According to Decision No.5 dated 27.05.2002 based on the Order of Ministry of Health No.165 dated 17.07.1995 (added by Orders No. 185 and 33 dated 04.08.1995 and 14.02.1996 respectively).

¹⁰ According to Law No. 7870 dated 13.10.1994 "On Health Insurance in the Republic of Albania" and the Council of Ministers' Decision No. 343 dated 03.07.1995 "On Health Service Expenditures Coverage for General Practitioners and Family Doctors by HII."

¹¹ The GP's compensation payment policy first described is in accordance with HII Decision No.5 dated 27.05.2002. Then, the policy described reflects the changes made with the very recent HII Decision No.11 dated 30.09.2003

Initial (Basic) Payment

- ▲ GPs receive a basic monthly remuneration of Lek 9,000 for providing general prophylaxis and hygiene-sanitarian duties and health preventive services.
- ▲ GPs receive, in addition, 2 percent of the basic monthly initial payment (i.e., Lek 180) for every working year served, but not more than Lek 4,500 per month (i.e., 50 percent of the monthly initial payment).
- ▲ Pathologists, pediatricians, and family doctors who have a degree in a post-university specialization from Tirana University Hospital (TUH) receive an additional payment of Lek 900 per month.

Payment per Caseload (based on tariff per person registered with the GP¹²)

- ▲ GPs serving adults receive Lek 4.9 per adult person registered (refer to Table 1).
- ▲ GPs serving the “0-14 years” age-group receive Lek 9.8 per such person registered.
- ▲ GPs and family doctors falling into the categories of GPs in rural areas and GPs serving all age-groups receive Lek 5.39 per person registered.¹³

Patients living within a district are free to choose the GP and/or family doctor with whom they register. In special cases, where patients live in border villages between two districts or where terrain conditions cause difficulties in receiving primary health care from the GP of the respective district, they can choose (i.e., register with) a GP of another district serving close to their area.¹⁴ While the law allows for patient choice in selecting a physician, there is not a well-publicized procedure for switching physicians. In general, the public is not aware that they have a choice and, in practice, there is usually not a very substantial difference across providers in one area with regard to the number of patients registered with each provider.

Payment per Location

Until recently, for GPs and family doctors, GPs in rural areas, pediatricians, and pathologists working far away from their homes, an additional payment¹⁵ was made conditional on whether they could return home from their place of work within a day. In September 2003, the HII changed the criteria used to determine payment per location. First, the HII wanted to avoid potential abuses with regard to whether GPs do, in fact, return home within a day from the health facility at which they work; and, second, the paperwork required to prove their home address had become an excessive burden of the HII's administration. Now, a GP's compensation is no longer related to the distance

¹² The GP who has entered into a contractual relationship with RDHI, on the first day of every month, submits to RDHI the declaration on the number of persons registered with him or her according to the form specified by HII. His remuneration is then calculated on the basis of that number.

¹³ In special cases, in areas where due to difficulties of terrain the GP does not complete the normal caseload of registered persons, his or her monetary compensation would be in each case approved by HII executive director as if there were a full caseload.

¹⁴ According to Council of Ministers Decision No. 84 dated 13.02.2003, “On Administration and Coverage with PHC Services from HII-Paid Medical Personnel.”

¹⁵ According to HII Decision No.5 dated 27.05.2002.

from the GP's home to place of work. Instead, it is related to the geographical classification of the facility in which each doctor works.¹⁶

The recent geographical classifications of health facilities and associated supplemented compensation are now as follows:

- ▲ For serving facilities *within municipalities in center cities*, GPs receive an additional monthly payment of Lek 3,000;
- ▲ For serving facilities *within municipalities and communes in plain areas*, GPs receive an additional monthly payment of Lek 13,000;
- ▲ For serving facilities *within municipalities and communes in hilly areas*, GPs receive an additional monthly payment of Lek 19,000;
- ▲ For serving facilities *within municipalities and communes in mountainous areas*, GPs receive an additional monthly payment of Lek 32,000; and

For serving facilities *within municipalities and communes in remote mountainous areas*, GPs receive an additional monthly payment of Lek 42,000.

Payment per Level of Responsibility Held

A last additional payment is made on the basis of the level of responsibility inherent in the post that a GP or family doctor holds. Compensation according to this criterion is as follows:

- ▲ The GP who is in charge (head) of a health center in an urban area receives an additional compensation of Lek 6,000 per month;
- ▲ The GP who is in charge (head) of a health center in a rural area receives an additional compensation of Lek 1,500 per month.

An Illustration of the Compensation Rules

To illustrate how these compensation rules work in practice, let us consider two extreme cases of GPs. One of them has the following characteristics: he has only one year of working experience; he does not hold a degree of post-university specialization from the TUH¹⁷; he works in a facility located in a remote mountainous area; and he is in charge of the facility where he works (which is typically the case with only one GP assigned to a rural health center). The other GP has differing characteristics: he is senior to the previous one in terms of years of working experience (10 years of experience); he has a higher academic degrees (a post-university TUH specialization degree); and he works in a center-city facility of which he is also in charge. Let us denote the first case by GP_R and the second one by GP_U.

The salary of the GP_R would be equal to an initial payment of Lek 9,180 (9,000 + 180 + 0) plus a payment per (normal) caseload of Lek 9,163 (5.39 x 1,700¹⁸) plus a payment per location of Lek

¹⁶ HII Decision No.11 dated 30.09.2003 replaced point 2.5 of Decision No.5 dated 27.05.2002.

¹⁷ A significant number of GPs serving at PHC facilities have no continuing medical education or other clinical training since completing their education years ago.

¹⁸ Refer to line 7 of Payment per Caseload in Table 1.

42,000 and Lek 1,500 for hierarchic position (0). So, the salary of the GP_R would total Lek 61,843 a month.

The salary of GP_U would be equal to initial payment of Lek 11,700 (9,000 + 1,800 + 900) plus a payment per caseload of Lek 9,800 (4.9 x 2,000¹⁹) plus a payment per location of Lek 3,000 plus a payment for hierarchic position of Lek 6,000. So, the salary of GP_U would add up to Lek 30,500 a month. Therefore, GP_R receives compensation almost double that of the GP_U, with all of the difference being (more than) accounted for by the payment per location.

Note that the difference in their payments for geographic location of workplace is substantial (Lek 39,000) and that other parts of the formula reduce that effect on total compensation by about 25 percent – total compensations differing by Lek 31,343. While this is admittedly an extreme example (even though it uses normal caseload figures), it illustrates the pronounced (and intended) effect of the formula to give higher compensation to those GPs working in rural and remote areas regardless of caseload. Just the payment to the GP_R per geographical location alone (Lek 42,000) is higher than the GP_U's *total* monthly compensation (Lek 30,500).

HII data from 2003 show that, out of 1,587 HII-contracted GPs, 735 were located in rural areas where they receive, on average, roughly double the monthly remuneration of 852 HII-paid GPs serving in urban areas. Some GPs in rural areas are required to cover more than one health center and/or health post, visiting each on different certain days of the week. Despite this attempt to ensure accessibility to PHC services by rural residents, there is low use of rural facilities by the rural population (as will be described in more detail in the next section). Because of the low (and declining) density of the rural population and the increased tendency of rural residents to bypass local health centers and health posts to go directly to urban polyclinics, many rural health facilities are underused.

Besides the large discrepancies of salaries among GPs according to location, it is also reported that they were generally increased by more than 50 percent as a result of the HII's creation in 1995 (as compared to the previous compensation regime). (The European Observatory on Health Care Systems, 1999).²⁰ This overall increase in GPs' salaries means that many of them are now earning more than specialists and even more than some hospital-based doctors, who had traditionally regarded GPs as inferior and as little more than gatekeepers to their own services (Reynolds 2003).

¹⁹ Refer to line 1 of Payment per Caseload in Table 1.

²⁰ The analysis was made in December 1996 and compared the current system to the situation prior to the introduction of Health Insurance Fund in July 1995 for covering the salaries of PHC physicians.

2.2 Productivity and Health Centers/Posts

2.2.1 Staffing Levels and Use Rates: Visits Per Person, Per Facility, Per GP

The above section described the evolution of, and the current arrangements for, paying general practitioners who serve in the primary health care system of health centers and health posts. After reviewing the facilities and staffing that constitute this system, and how it has evolved, we now present evidence concerning the productivity with which PHC services are delivered – relating the number of visits made at these facilities to the staffing, the facilities, and the costs of providing those services. Following this section is one describing the costs of drugs prescribed in these facilities, and their relative magnitudes compared to the salaries of the GPs.

A basic PHC system oriented towards the health of mothers and children was established prior to 1990 through an extensive network of health centers and health posts. Since 1989, however, there has been a severe decline in the numbers of these facilities nationwide. Between 1989 and 2003, the number of health centers declined by 43 percent, from 1,000 to 571, and the number of health posts declined by 40 percent, from 2,300 to 1,375.

The substantial decrease in the number of health centers/posts over this 14-year period is explained partly by the considerable damage to facilities that occurred during 1997 civil turmoil and partly by the related fact that some rural health services had ceased to function due to shortages of equipment and staff resignations.

In rural areas, a typical health center is staffed by one GPs and two or three nurses, while a health post is staffed by a nurse or a midwife. The 50 polyclinics now operating only in urban areas across the country are staffed by specialists as well as by GPs – the latter posted there to serve as the first point of contact for all patients coming to the polyclinic. But, specialists serving on polyclinic staffs often try to attract patients directly, encouraging patients to bypass GPs' primary care services (see Table 2).

Table 2: Staffing Levels for 1999 and 2003

Staffing 2003	GPs		Specialist MDs		Total MDs		Nurses/midwives	
	1999*	2003	1999*	2003	1999*	2003	1999*	2003
Polyclinics		-	363	<520**	363	520	670	904
Health centers/posts	1,557	<1,587	0	0	1,557	1,587	4,300	4,895
Total	1,557	1,587	363	520	1,920	2,107	4,970	5,799

Source: Ministry of Health, Albania

* Fairbank et al. April 2003

** Ministry of Health does not report the physician staff in polyclinics divided into GPs and specialists. The latter, however, constitute the majority of total staff.

Note: MD = physician

Since 1989, the number of GPs serving in health centers/posts was relatively unchanged. From 1999 to 2002, GPs increased by only 2 percent, total physicians increased by 10 percent, and

nurse/midwives increased by 17 percent. A further increase in nurse/midwife staffing (10 percent) occurred from 2002 to 2003, when the number of health posts was increased.

The rate of visits made by type of facility shows a large difference between urban and rural areas (see Table 3). It was estimated that, in 1999, an average of three visits per day were made to rural health centers/posts, as compared to 19 visits per day made to urban health centers. Meanwhile, a total of 184 visits per day were made to urban-based polyclinics. Data from 2001 show that the number of visits per day made to rural health facilities has remained low whereas the visits per day made to urban health centers increased significantly (from 1999) while visits to polyclinics stayed about the same. As the remuneration scheme for HII-paid GPs does not include any compensation that is related to the number of services provided or to their quality, one could conclude that only three visits per day made to GPs at rural facilities is a rate of productivity much too low for the high compensation such providers receive.

Table 3: Number of Visits and Visits per Facility per for 2001, 2002, and 1999

Facilities	Number of Facilities		Total Visits		Visits per Facility/Day		
	2001	2002	2001	2002	2001	2002	1999*
Polyclinics	50	50	2,224,219	2,120,706	178	170	184
Health centers/posts	1,991	1,946	2,993,513	2,714,761	6	6	5
Urban	176	NA	1,575,573	NA	36	NA	19
Rural	1,815	NA	1,417,940	NA	3	NA	3

Source: Ministry of Health, Albania

* Fairbank et al. April 2003

In general, utilization rates for PHC (i.e., outpatient) services²¹ have declined considerably since 1989, from 3.9 visits per person per year to about 1.6 visits per person per year in 2000, according to MOH data. Since 2000, the MOH data are that visits per person per year rose to 1.9 in 2001 before slipping back to 1.6 in 2002. HII data for 2001 indicate that the average number of visits per person per year made to health centers/posts nationwide was roughly 1.0.

The difference between the MOH figures for total outpatient visits and the HII data for visits to health centers/posts is likely accounted for by visits to specialists in polyclinics. These data for both types of facilities are shown for 2002 in Table 4.²² The visit rate to health centers/posts shows a decline from 1.0 in 2001 to 0.9 in 2002.

²¹ Visits to polyclinics include outpatient visits to specialists.

²² Because of emigration, Albania's population in 2002 and 2003 is not likely to be appreciably changed from that estimated for 2001.

Table 4: Number of Visits per Person, per Facility, per MD, by Type of Facility

	Health Centers/Posts	Polyclinics	TOTALS
Total population (2001)	3,069,275	3,069,275	3,069,275
Total visits (2002)	2,714,761	2,053,831	4,778,592
Total facilities (2002)	1,946	50	2,006
Total MDs (2003)	1,587	520	2,107
Visits/person	0.88	0.67	1.55
Visits/facility	1,395	41,277	NM
Visits/MD	1,711	3,969	2,268

Source: Ministry of Health, Albania, 2002 (except as noted)

The lower utilization rate per person in rural areas is also reflected in utilization rates by type of facility – health posts being exclusively located in rural areas. Table 5 shows that the number of visits per health post per year (568) is much lower than the number of visits per health center per year (3,386). This is to be expected, to some extent. Yet, as will be discussed below, the resource cost of coverage by these health posts with such low utilization is quite high. As nearly 60 percent of population lives in rural areas, it is significant that these findings lead to the conclusion that PHC facilities located in rural areas, and GPs posted in rural areas, are utilized much less than such facilities and GPs in urban areas.

Table 5: Number of Visits per Facility, 2002

	Visits to Health Center	Visits to Health Post	Visits to Health Center or Health Post
Total visits	1,933,594	781,167	2,714,761
Total facilities	571	1,375	1,946
Total visits per facility	3,386	568	1,395

Source: Ministry of Health, Albania, 2002

2.2.2 Staffing Costs and Utilization Rates

Table 6 shows that the total operating costs of delivering PHC services have steadily increased since 2002. The increase in the operating costs of polyclinics, health centers, and health posts can be explained by, apart from other economic reasons, the increase in salaries paid and by the increase in facility numbers (refer to Table 2).

Table 6: Operating Costs of Polyclinics, PHC Sites, and Public Health, 2002-2004

	Budgeted Operating Costs (000/Lek)*		
	2002	2003	2004
Polyclinics	656,118	691,650	797,072
Health centers/posts/dental clinics	1,357,182	1,532,989	1,777,982
Public health service**	275,500	319,868	335,500
Total	2,288,800	2,544,507	2,910,554

Source: Ministry of Health and Health Insurance Institute, Albania

* Includes estimated budgeted costs from all sources to operate the facilities. Expenditures on essential drugs, mostly reimbursed by the HII, are *not* included in these costs (see the next section for a discussion of these costs).

** This includes the staffing costs of the Hygiene and Epidemiology Service, and, in the case of Tirana, it also includes the staffing cost of the Institute of Public Health.

Table 7 tells us that the average staffing cost per visit made to health centers/posts is 35 percent higher than the average staffing cost per visit made to polyclinics. This is because the health centers/posts staffing costs have been higher (almost double) than those of polyclinics over the last two years. The staffing costs per visit made to polyclinics and health centers/posts for 2001 have both decreased as compared to 1998. Data from 2002 estimate that the average staffing cost per visit made to polyclinics and health centers/posts are, respectively, Lek 310 and Lek 500.

Table 7: Costs per Visit for 2002 and 1998

Facility	Operating Costs (000s Lek) 2002	Total Visits 2002	Cost/Visit (Lek) for 2002	Cost/Visit (Lek) for 1998*
Polyclinics	656,118	2,120,706	310	313
Health centers/posts	1,357,182	2,714,761	500	537
Total	2,013,300	4,835,467	416	435

Source: Ministry of Health, Albania

* Fairbank et al. April 2003

2.3 HII Spending: GP Salaries and Reimbursement for Essential Drugs

As a share of the HII's budget expenditures over time, payments to GPs have varied from 1995 through 2003, but it has averaged an estimated 21 percent of total expenditures (see Table 8). During this nine-year period, the budget (both revenues and expenditures) has grown steadily – expenditures rising almost fourfold over that time, an average compound rate of more than 12 percent per year. For the latest year (2003), the HII spent 52 percent of its budget on drugs, 23 percent on GP salaries, 15 percent on pilot project expenses,²³ 7 percent on administrative expenses and only 3 percent on investments.

²³ The HII through the RDHI, with joint funding from Durres Hospital, financed the rehabilitation of Durres Hospital. Pilot project expenses also include expenses related to the Tirana Regional Health Authority.

Table 8: Health Insurance Institute Budget for 2001-2003 (Lek million)

	1995	1996	1997	1998	1999	2000	2001	2002	2003
Revenue									
State contributions	42%	34%	45%	46%	49%	46%	49%	45%	45%
Payroll deductions	57%	58%	54%	53%	50%	53%	49%	53%	51%
Others	1%	8%	1%	1%	1%	1%	2%	2%	4%
Lek (Million)	871	1,475	1,755	2,321	2,654	2,826	3,447	3,611	4,639
Expenditure									
Drugs reimbursement	73%	67%	74%	75%	75%	70%	57%	47%	52%
GP payments	18%	26%	21%	18%	18%	22%	20%	24%	23%
Administration, investments	9%	7%	5%	7%	7%	8%	7%	9%	7%
Pilot project expenses							15%	18%	15%
Lek (Million)	1,137	1,270	1,623	2,378	2,592	2,436	2,967	3,604	4,367

Source: Health Insurance Institute, Albania, 2003.

With respect to its spending on prescription drugs, the HII pays for the cost, either partly or wholly, of any of 344 prescription products on the reimbursable pharmaceuticals list that was last revised (expanded) in 2003. The HII reimburses (for its beneficiaries)²⁴ between 50 percent and 100 percent (depending on the class of beneficiary) of the reference prices of pharmaceuticals included in the list (the average reimbursement is about 75 percent of the cost). In most former centrally planned economies, pharmaceuticals account for a high proportion of health service expenditures and, since the introduction of health insurance in 1995, “drug reimbursement” has been the largest expenditure item in HII budget.

During the 1996-1999 period, drug reimbursements’ share in HII expenditure showed an increasing trend so that, by 1999, HII spent 75 percent of its budget on drugs. For the period 1999-2003, however, the trend reversed, so that, by 2002, HII spent approximately 20 percent less of its budget on drugs as compared to 1999. Moreover, the total number of prescriptions reimbursed by the HII in 2002 was relatively smaller (2,260,694) than the number made in 1999 (2,700,000), while the cost per reimbursement increased from Lek 700 to Lek 837. To some extent, the increase is explained by the fact that more expensive drugs have been prescribed by GPs and have been reimbursed by HII in 2002 than in 1999.

Reynolds (2003) noted that drug reimbursement by the HII is not indexed to price changes and inflation, so that the pharmacists of the 664 pharmacies (2003) that have contracts with HII are able to pass on the cost of drug price increases to consumers (over and above what the HII reimburses). Despite the minor changes that were made in the List of Reimbursed Pharmaceuticals of 2003, the HII has also adjusted the reference prices based on the prices declared in the MOH Directorate of Pharmaceuticals for 2003 and on the exchange rates (of foreign currencies in Lek) for the first quarter of 2003.²⁵ There is a wholesale price ceiling²⁶ of drugs of up to 12 percent more than the initial import prices converted into Lek according to the average exchange rate adjusted every six months as announced by the Bank of Albania.

²⁴ According to the Decision No. 347 dated 11.07.2002 of the Council of Ministers.

²⁵ According to Reynolds (2003), the MOH Directorate of Pharmaceuticals that provides price information to HII, has so far been reluctant to obtain the import prices of drugs from importers and pharmaceutical companies.

²⁶ Decision No. 307 dated 19.05.1998 of the Council of Ministers specifies this.

Revenues of the HII have been more or less evenly divided between the two major sources: about half comes from employed enrollees whose mandatory contributions²⁷ are deducted from their wages and salaries as part of a number of social insurance taxes levied in the modern sector; about half comes from the state in the form of budget transfers to cover the costs of the benefits granted to “inactive” or vulnerable populations (noncontributors who enroll by virtue of their belonging to a specific population group.²⁸) The state budget transfer is an amount thought to be needed according to the HII given the historical experience of the population covered. As shown in Table 8, in recent years enrollee contributions have begun to outpace state budget transfers. Health insurance contributions have been collected, until recently, by the Social Insurance Institute, which has been responsible for collecting all social insurance taxes – taking a 1 percent fee for administrative costs before transferring its health insurance collections to the HII. Enforcing compliance with social insurance tax collections is made more difficult by the high level of the total taxes mandated; health insurance cannot be purchased independently of the requirement to make the other social insurance contributions at the same time.

Recently, however, some flexibility has been legislated in order that voluntary health insurance could be legalized. The law now allows citizens to voluntarily insure themselves with voluntary health insurance schemes²⁹ whenever, and with reasonable motives, they could not be compulsorily insured. Such voluntary insurance is made according to terms and conditions laid down in the Regulation of Health Insurance Institute. Furthermore, on 26 June 2003, the Council of Ministers approved a draft law³⁰ that makes some amendments to the previous law laying down the necessary legal grounds to shift the authority of collecting social insurance contributions from Social Insurance Institute to General Tax Office. Since June 2003, the health insurance contributions will now also be collected by the General Tax Office. This change, apart from other positive impacts, will create opportunities to improve and strengthen the infrastructure of collecting state taxes, setting up an appropriate environment to minimize evasion of social insurance and other taxes.

²⁷ Employers are required to contribute 1.7 percent of basic wages and salaries and employees are required to contribute another 1.7 percent. It is reported that only 25 percent of the total workforce is in formal employment (receiving regular paychecks) and that only 40 percent of them comply with this mandatory contribution. Self-employed and voluntary contributors pay 7 percent of the statutory minimum wage. The total amount of social insurance taxes withheld from pay is roughly six times the level devoted to health insurance.

²⁸ Children, nonworking students, elderly on pensions, disabled, unemployed, persons receiving social assistance, mothers on maternity leave, veterans, and citizens performing compulsory military service.

²⁹ The Law No. 8961 dated 24.10.2002 “On an Amendment to the Law 7870 of Health Insurance,” Article 4/1.

³⁰ “On Some Additions and Amendments to Law No. 7703 dated 11.05.1993 (The Law on Social Insurance in the Republic of Albania).

3. Costs and Utilization of PHC Facilities: A Detailed Analysis of Four Facilities in Berat and Kuçove

This second part (the micro-level analysis) focuses on detailed cost analysis of four specific facilities in Berat and Kuçove that have been PHR*plus* project sites since 2001. This section has four parts. The first discusses the mathematics of calculating the unit cost of service production. The second describes the various concepts and categories of cost and their implications for measuring them in relation to output of services. The third discusses how data measurements were made at each of the four project sites,³¹ and presents estimates of those measures for the first 12 months of operations. The final part addresses the question of the cost of optimizing production of PHC services – that is, the cost of producing those PHC services that ought to be provided – at the project sites. Because the answer depends upon a decision about the optimal way to organize the delivery of PHC services (there are clear inefficiencies in the current organization of facilities), it is not possible to give an unqualified answer. The conclusion of this section, however, summarizes the various uses of cost and utilization data in helping to plan a possible reorganization of services through a simple system of planning and budgeting.

3.1.1 The Mathematical Derivation and Meaning of the Unit Cost of Service Production

By definition, the unit cost of service production is the average of all costs of the inputs that are – directly and indirectly – used to produce one unit of service. To derive this average, all costs attributable to production are summed up in the numerator, and all the units of service (the attributable costs of production of which are in the numerator) are summed up in the denominator. The resulting division of units (denominator) into costs (numerator) provides one number referred to as “cost per unit of service.”

Note that it is possible to drastically alter the result of such a division by substantially altering either the numerator (while the denominator remains relatively unchanged – i.e., costs rise while use does not) or the denominator (while the numerator remains relatively unchanged – i.e., use rises while costs remain relatively stable). One must be cautious in interpreting “unit cost” results, therefore, in situations where the numerator and denominator could be relatively independent of one another (which is usually true in the short-run). This relative independence can occur when the numbers reflect short-term fluctuations that may imply changes in underlying assumptions that are not immediately quantifiable. For example, a short-term rapid increase in visits to an underutilized clinic (in response to an flu epidemic, say) would lead to a reduction in “cost per visit” without there being any corresponding policy importance to be attributed to such a reduction – unused staff time would be absorbed without any increase in staffing costs until availability of staff time became a binding

³¹ Methods used in gathering and compiling the data on PHC costs in these four sites is in Annex A.

constraint; at that time, the service quality and time spent per visit would most likely have to decline correspondingly if use kept increasing. If the increase in visits were indeed to turn out to be temporary, total costs and “cost per visit” would increase unnecessarily if the policy response were to add more staff just as the epidemic was subsiding.

Of course, an accurate calculation of unit cost in any event is not that simple, if only because it is the result of dividing one number by another (each of which are themselves determined by many disparate factors). Problems of interpretation can proliferate, particularly if the analyst is seeking an average cost that is aggregated across many discrete producers of services, that is, across many different clinics or health centers – some of which may be relatively active and extensively used (and, therefore, relatively productive and efficient) and others which may be relatively inactive and seldom used (and, therefore, relatively inefficient).³² Even if one could reasonably assume some central tendency of productivity for all sites aggregated, a further requirement would be that an aggregation must be of similar units of service (in terms both of types of services and in terms of quality) and that the costs used in the numerator must be only those attributable to production of the services being analyzed.

Consistent correspondence of costs with the units of services they produce is difficult to ensure, particularly across many different producers of services, i.e., clinics offering different ranges of services. One can easily understand that the most common “unit” of service adopted for unit cost analysis – the patient “visit” – could include different service intensities across the many different clinics that might be aggregated to arrive at a unit cost for a whole system of clinics. Caution is therefore advised in interpretation of any aggregate average cost data. There can be some benefits, however, from noting the more egregious differences in average costs that may show up in aggregated analyses. (An example of this is described at the end of the paper in Annex A.)

3.2 Defining Categories of Costs and Utilization

Measuring the level of resources used in producing services requires some initial conceptual definitions and distinctions, as provided below. (Categories of costs and methods for collecting them are discussed in Annex B.)

3.2.1 Capital versus Recurrent Costs

Accountants make a distinction between expenditures on inputs that, once purchased, can be used continuously over time (capital costs) and expenditures on inputs that have a relatively short lifespan (operating costs). Most capital costs involve investment in physical facilities (e.g., buildings) and durable equipment (e.g., vehicles) that have a market value, even while being used in a production process. While such capital inputs need to be replaced over time because they wear out, accounting for their costs is done separately because the amounts are relatively large when needed, and because they need to be purchased infrequently. All capital costs, however, imply some level of operating costs required for their proper maintenance over time and for their efficient use within the production process. Accurately anticipating the future recurrent costs required by present capital

³² The average level of efficiency or productivity across all facilities would heavily influence the average cost (when aggregate costs are divided by aggregate numbers of visits), but it cannot be known. (See Annex A for further discussion of this issue.)

investments is an important element of long-range planning, particularly in planning inpatient care services.

Needless to say, processes and methods for budgeting for these two types of costs are distinct and separate. This paper therefore henceforth addresses itself exclusively to budgeted expenditures for recurrent costs of running PHC facilities (health centers and health posts) using PHR*plus* project sites as examples. (Prescription drug costs are not included in these facility costs as they are provided by private retail outlets not associated with the PHC facilities.)

3.2.2 Direct Costs versus Indirect Costs

Recurrent costs comprise both direct and indirect costs. Direct costs are those costs incurred for inputs that are directly related to the production process at the service facility, like staff salaries, supplies, utilities, and rent. Indirect costs are those costs incurred for administration and management of a broader number of related facilities or outputs (including the one facility, and its outputs, for which direct costs are being calculated), and a portion of which must be allocated to the production being costed (as necessarily supporting that production). Full financial costs³³ of production would include both direct and indirect costs.³⁴

3.2.3 Fixed versus Variable Costs

The total cost of producing any service (or product) comprises fixed costs and variable costs. Fixed costs are the costs of inputs that are required to be paid no matter how many services are produced. Variable costs are the costs of inputs that are determined by the number of services actually produced. Whether any particular cost is fixed or variable depends, to some extent, on the time horizon of the accounting period. Some costs that are “fixed” in the short run (for a year, say) can be “varied” in the long run (more than a year, say), if more (or less) of a particular input that needs to be fixed (under contract, say) in the short run can be varied in the long run. For example, staff salaries are a fixed cost in the short run, but are a variable cost in the long run, since staffing can be adjusted to the needs of the utilization of services experienced. The relationship of costs (fixed and variable) and output of services is reflected in what economists call a “cost function,” which shows how total costs change as output changes. The shape of this cost function curve will indicate both average and marginal costs at any particular level of output (and can be conceptualized both for the short run and for the long run for any particular facility). Obviously, the cost function of any facility would change if the package of services to be offered by the facility were to change, and/or if the costs of the inputs were to change.

³³ “Financial costs” are those costs that are explicitly needed for, or associated with, production processes. An accounting of financial costs does not necessarily include all “economic costs,” which would incorporate those implicit costs, such as opportunity costs, that are associated with production but which do not necessarily have to be paid by producers. “Financial cost analysis” focuses on analysis of expenditures linked to particular outputs of production.

³⁴ Typically, indirect costs (i.e., mostly accounted for by administrative costs) usually amount to between 5 percent and 15 percent of total cost in the production of services such as we are discussing. No estimate of such costs is included in this cost estimate because a reasonable estimate for such a small sample of facilities would be only a guesstimate.

3.2.4 Average versus Marginal Costs

Economists make an analytical distinction between fixed and variable costs (as described above) because it is important to make associated distinctions between average total costs and marginal costs. At any particular level of production, average total cost is the total cost (fixed plus variable costs) divided by the number of services produced (and consumed). Marginal cost at any level of production is the change in (variable) costs that would result from a one-unit change in production from that level. When variable costs change, of course, fixed costs remain the same.³⁵

As can be shown, the most efficient volume of production (for the level of fixed costs that funds one facility) is achieved at the point where average total cost is the lowest (that is, production can expand towards greater efficiency until the point where average total cost stops declining and begins to rise). This level of production also is the point at which average total cost and marginal cost are equal. In many PHC facilities, there is often unused capacity, that is, the staff is underutilized and basic supplies are insufficient to the need – leading to a vicious cycle where low utilization leads to still lower utilization, as patients bypass the clinics (which are overstaffed while undersupplied) in order to try to gain access to urban polyclinics where specialists and more adequate supplies are more often available (or, at least, are thought to be more available). This means that it is common at PHC facilities for average total costs to be relatively high, and marginal costs to be relatively low, and that there are efficiency benefits to be gained both from transferring some staff to other uses and also from adding needed medical supplies to attract more patient demand to increase utilization. In fact, where there is “slack fixed capacity” (excess staff as compared to the needs for staff given the level of utilization), there is a large opportunity to increase productivity and efficiency. Higher production in these instances is quite possible to achieve and would lead to lower average total costs at the same time.

3.2.5 Costs of Optimal Production versus Costs of Suboptimal Production

Calculation of the service production costs associated with low levels of service utilization will not often reflect an optimal or efficient production of services. In fact, in many Albanian PHC facilities, service production is suboptimal (or inefficient, or both) because staffing levels are inappropriate to the level of use (almost always too many staff for the level of use the clinic experiences) and because needed ancillary supplies are not in adequate supply (insufficient budget for operations). This may be true regardless of the package of services that were intended to be offered at the facility. The calculated costs are thus not of the ideal or desired level of services, but, rather, are a reflection merely of the staffing used and of the operating budget available and of the relatively low level of use that the lower quality of services elicits from patients. It is useful, however, to know actual costs, to put these actual costs in perspective (refer to Annex A), and to discuss efforts to estimate costs of optimal production of PHC services.

³⁵ In the short run, when there is slack capacity. In the long run, expansion of the facility to meet increased demand would require fixed costs to rise.

3.2.6 Categories of Utilization: Attributing Use to Particular Costs

As noted earlier, measures that relate costs and use are calculated with costs in the numerator and use in the denominator. There are a limited number of use measures in ambulatory care, the most common being the “visit.”³⁶ The costs in the numerator should include only those costs attributable to the visit, which may or may not include prescription drugs, but would usually include all direct and indirect costs supporting the delivery of services received during a visit. Thus, for ambulatory care, the most common measure of resource use relative to output is “total cost per visit.” A total cost per visit would include both the fixed costs and the variable costs of providing that visit. As has been noted, if the marginal cost of providing a visit is significantly different than the average total cost (usually, it is much lower), then there is considerable inefficiency in the process that is producing that visit.

3.3 Estimates of Total and Unit Costs of PHC Services

The following section presents the results of gathering and analyzing the data on costs and utilization of PHC services at the four PHR*plus* project sites in Berat and Kuçove (see Annex C). After presenting the total and average annual costs of these sites for 2002/03, subsequent sections show how one could use average cost and use data for analyzing alternative approaches to service delivery that would save money and/or provide more and better quality services at lower average costs.

3.3.1 Total Annual Costs of PHR*plus* Pilot Health Centers

Table 9 shows the total costs (and relative distribution of costs by category) of each of the four pilot health centers in Berat and Kuçove for the 12-month period from July 2002 through June 2003. Personnel costs naturally dominate, and the next largest component (space costs) varies from 7 percent to 21 percent of the total costs. The monthly cost of equipment is estimated as described earlier. The health center of Lapardha has a delivery house with beds and other equipment, provided by a USAID-funded project that renovated and equipped several health centers in the area during 2000-01.

³⁶ Alternatives to “visit” are “consultation” or “injection,” to name the two main purposes for which people visit PHC facilities in Albania.

Table 9: Total Costs of Four Pilot Health Centers in Lek (000,000s) and in Percent

Estimates of Costs in PHRplus Sites								
Type of Costs	Llukan Prifti		Lapardha		Havaleas		Muzakaj	
	Lek (000,000s)	%	Lek (000,000s)	%	Lek (000,000s)	%	Lek (000,000s)	%
Fixed Costs								
Staff	3,630	87%	2,091	62%	844	76%	4,382	86%
Utilities	219	5%	111	3%	24	2%	203	4%
Rent	239	6%	420	12%	240	21%	360	7%
Equipment	33	1%	698	21%	10	1%	100	2%
Subtotal Fixed Costs	4,121	99%	3,320	99%	1,117	100%	5,045	98%
Variable Costs								
Supplies	60	1%	43	1%	0	0%	78	2%
Subtotal Variable Costs	60	1%	43	1%	0	0%	78	2%
Total Costs	4,181	100%	3,363	100%	1,117	100%	5,123	100%

* Estimates for 12 month period July 1, 2002 – June 30, 2003

3.3.2 Average Total Annual Costs and Staff Use of PHRplus Pilot Health Centers

Once the numerator (total costs, from Table 9) is divided by the denominator (number of visits), the total costs per visit per facility show a wide variation (in Table 10): from Lek 814 per visit at Lapardha to Lek 163 per visit at Havaleas. It is notable, however, that the highest average cost facility, Lapardha, also has a relatively high staffing pattern, with one doctor and six nurses, who are performing services only 9 percent of the time they are on duty. The most productive facility, Havaleas, in which the three staff persons spend 35 percent of the time on duty performing services, is also the facility with the lowest average total costs. The other two facilities have roughly the same average total cost and the same staff utilization of 12 percent of time on duty actually performing.³⁷

**Table 10: Average Costs of Pilot Health Centers:
Total Staffing, and Staffing Capacity Actually Used**

	Pilot Health Center			
	Llukan Prifti	Lapardha	Havaleas	Muzakaj
Total costs (Lek)	4,180,837	3,362,520	1,117,412	5,123,457
Total visits	17,588	4,130	6,872	20,715
Avg total cost/visit (Lek)	238	814	163	247
% of total staff time used*	12%	9%	35%	12%
% of MD staff time used*	22%	31%	37%	26%
Number of MDs on staff	6	1	1	5
Number of nurses on staff	10	6	2	14

* Total time spent with patients as a % of total time on the job.

³⁷ It is reported that average time spent per patient per physician has increased since July 2003 in these facilities, but the data are not yet available.

The evidently excessive amount of staff and the associated low productivity suggest that steps could be taken to increase the number of visits handled per staff member, thus lowering the average total cost per visit. There are many paths towards improved efficiency, but it serves here to illustrate three distinct interventions:

1. Reduce the number of physicians assigned to the health center (now apparently more than needed);
2. Use part of the savings from reduced staffing to purchase needed supplies for the health center; and
3. Through use of clinical practice guidelines (CPGs) and other measures to improve the quality of physicians' contact time with patients, increase the time spent per patient and thus the quality of care delivered at the health center.

The first step reduces the costs of compensating GPs on staff, freeing up funds to purchase needed supplies (some budgetary autonomy is required, of course, for any facility to achieve such a step). The second and third steps, taken together, would likely result in increased utilization of services, and, hence, of the available time spent by GPs in patient contact. The illustrative example below shows the hypothetical effect of taking these three steps at the Llukan Prifti Health Center.

In this illustration, it is hypothesized: first, that the total number of medical staff is reduced by one-third, from six doctors to four doctors; second, that some of the savings from this reduction (i.e., 25 percent of the savings) is used to purchase needed supplies and equipment; and third, that implementation of CPG and other measures to improve clinical quality give doctors the tools and the incentives to spend more time with patients. The latter two interventions, in combination, are hypothesized to increase utilization by 25 percent.

The illustrative example in Section 3.3.3 below shows, in two steps:

- ▲ The impact of lowering medical staff by 33 percent (at 2002/2003 rates of time spent per patient, the staff work performance rate rises from 22 percent to 33 percent of time actually at work) (Section 3.3.3.1), and
- ▲ The impact of applying 25 percent of the savings from such a reduction to the purchase of supplies and equipment and of improving provider quality by implementing CPGs and improved clinic management (hypothetically increasing the number of visits by 25 percent and staff performance time to 83 percent of time spent at work) (Section 3.3.3.2).

Thus, total patient contact time as a percent of total available time per doctor would rise 25 percent due to the increase in use (from 33 percent to 41 percent) and then would double from the increase in time spent per patient (from 41 percent to 82 percent). A summary of the hypothesized changes is presented in Section 3.3.3.3.

3.3.3 Using Average Cost and Use Data for Analysis

This section shows how several changes in the operations of a clinic could easily produce more efficient operations. One change could be to serve the same number of visits with a reduced level of medical staff, say reducing the number of doctors now on duty at Llukan Prifti from the current six to only four. Some of the savings from this reduction (i.e., 25 percent) could then be used to purchase

needed supplies and equipment that could serve to increase utilization. Finally, improvements in provider quality and in clinic management could then be used to increase utilization and facility productivity still further.

3.3.3.1 Reducing Average Total Costs by Reducing Excessive Staffing

While personnel costs are considered a fixed cost in the short run, they can be varied in the long run, reducing total costs, and thus reducing average total costs, without affecting utilization (where existing staff is very underutilized). For example, at Llukan Prifti, a 33 percent reduction in the medical staff would result in a yearly savings of Lek 613,371, which would in turn lead to a reduction in average total costs from Lek 257 to Lek 219 – without any change in patient utilization, as seen in Table 11.

Table 11: Illustrating Cost Savings Possible from Reducing Medical Staff by 33 Percent

Llukan Prifti Health Center	Cut MDs 33%*	
MD patient contact %	22%	33%
Savings		613,371
Fixed Costs (non-staff)	490,957	490,957
Variable Costs (staff)	3,629,880	3,016,509
Other Variable (supplies)	60,000	60,000
Total Variable	3,689,880	3,076,509
Total Costs	4,180,837	3,567,466
Visits	16,293	16,293
Average Total Costs	257	219

* Reduce MD staff from 6 to 4.

3.3.3.2 Reducing Average Total Costs Further by Applying Some of Savings towards the Purchase of Needed Supplies to Induce Increased Utilization (e.g., by 25 percent)

If only 25 percent of the Lek 613,371 (Lek 153,343) were used to purchase needed supplies and equipment,³⁸ and utilization were to increase (e.g., by 25 percent) because of the improved capacity and quality, it would be possible to reduce average total costs still further, without increasing staff. Staff time in performance would increase from 33 percent to 41 percent (to attend to the 25 percent increase in patient use), and total costs would still be Lek 460,028 lower than originally, while utilization would increase from 16,293 to 20,366. Average total costs would drop still further from Lek 219 to Lek 183 – as seen in Table 12.³⁹

³⁸ The remaining 75 percent (Lek 460,028) represents budgetary savings that could be invested elsewhere.

³⁹ Of course, the net increase in total costs (Lek 153,343) which is associated with a net increase in patient use in the amount of 4,073 visits per year implies a marginal cost per added visit of about Lek 38, when compared to the case in which savings are not spent. But, note that even with an additional 4,073 visits to 33% fewer physicians, the additional money spent on supplies still results in savings of Lek 460,028. Compared to the initial situation, marginal cost is nil.

Table 12: Illustrating Additional Average Cost Savings Possible from Using Some of Savings from Staff Reductions towards Purchase of Medical Supplies

Llukan Prifti Health Center	Before Supplies Purchased	After Supplies Purchased/Quality Improved
MD patient contact %	33%	82%
Savings	613,371	460,028
Fixed Costs (non-staff)	490,957	490,957
Variable Costs (staff)	3,016,509	3,016,509
Other Variable (supplies)	60,000	213,343
Total Variable Costs	3,076,509	3,229,852
Total Costs	3,567,466	3,720,809
Visits (assume 21 % increase)	16,293	20,366
Average Total Costs	219	183

3.3.3.3 Summary of this Illustration of Improved Efficiency

Table 13 consolidates the information provided in Tables 11 and 12 in order to show in one table the financing changes that are associated with a hypothetical 33 percent reduction in physician staffing and a hypothetical investment of 25 percent of the resulting savings in the purchase of more supplies – the end result being an increase in utilization (assumed to be +25 percent) and a reduction in total costs per visit from Lek 257 to Lek 183.

Table 13: Summary Illustration of Improved Efficiency from Financing Reforms (an example of costs and utilization with possible changes at Llukan Prifti)

Llukan Prifti Health Center	Currently	Cut MD staff 33%	Purchase more supplies/improve provider quality*
MD patient contact %	22%	33%	82%
Savings		613,371	460,028**
Fixed Costs (non-staff)	490,957	490,957	490,957
Variable Costs (staff)	3,629,880	3,016,509	3,016,509
Other Variable (supplies)	60,000	60,000	213,343
Total Variable Costs	3,689,880	3,076,509	3,229,852
Total Costs	4,180,837	3,567,466	3,720,809
Visits (assume 21 % increase)	16,293	16,293	20,366
Average Total Costs	257	219	183

* Causing utilization to rise by 25%

** With clinic autonomy and global budget (or other innovative provider payment method), savings could be used for added improvements to increase productivity

3.3.4 Further Use of Average Cost and Use Data for Policy Analysis: Alternative Provider Payments

Granting PHC clinics the management autonomy (to determine service mix and staffing levels) would enable the use of alternative provider payment methods by the HII. For example, with a global budget for contracted services, improved performance would be likely at lower average costs. Furthermore, with a flexible contract, physician compensation could be a combination of a (capitated) base salary plus fee-for-service income (on selected services), giving staff the incentives to improve quality as well as to increase clinic productivity. Some of the fees-for-service could be reimbursed by the HII insurance (which would also cover the reduced base salaries) and some could constitute copayments by patients.

Savings from staff reductions could be used to improve services through investments in medical equipment and through purchases of needed supplies. Additionally, bonuses could be offered to staff as incentives for better performance, higher quality of services, and improved responsiveness to patient needs.

4. Conclusions and Recommendations

4.1 The National Picture

The data presented above (and summarized for 2002 in Table 14) has shown rather conclusively (when compared to previous years' data) that fewer (and lower quality) PHC services are being produced now, as compared to 15 years ago, but that they are costing more than ever both in total and on average. The economic (and social) hardships in rural areas are making it more difficult to post GPs there at the same time they are motivating rural residents (who are declining in number anyway) to bypass the nearest health center or health post in favor of a visit to the closest urban polyclinic.

Table 14: Outpatient Yearly Visits per Facility, Per GP, and Per Person, and Average Costs per Visit by Facility (2002)

Visits per person HPCs/HPs	Visits per person, polyclinics	Visits per HC	Visits per HP	Visits per HCs&HPs	Visits per polyclinic	Visits per GP (Total)	Cost per visit, polyclinics	Cost per visit, HCs/HPs	Cost per Rx (to HII)
0.9	0.7	3,877	531	1,395	41,277	2,268	Lek 310	Lek 500	Lek 837

Source: Ministry of Health, Health Insurance Institute, and calculations above in previous tables.
Note: HC = Health Center, HP = Health Post, Rx = prescription

While utilization rates have dropped steadily through the 1990s, there has been no apparent scarcity of Albanian government budget funds, in the aggregate, for primary health care.⁴⁰ In 1999, it comprised about 43 percent⁴¹ of the total amount the government spent on health (this figure includes government [MOH] financing of polyclinics and social insurance financing [through the HII], particularly of essential drugs⁴²).

But, while the aggregate level of resources for PHC seems adequate, there is some evidence that it is inefficiently allocated. The HII's funding of PHC (almost half of the PHC total) is devoted to financing deployment of GPs roughly in accord with the distribution of the population (23 percent of its 2003 budget) and to reimbursing for prescription drugs (52 percent of its 2003 budget). Of the 1,587 physicians who contracted with the HII in 2002, 735 were located in rural areas (staffing more than two-and-a-half times as many facilities as were located in urban areas, most of them on an intermittent basis), where they could receive compensation between 150 percent to 250 percent of that of urban HII physicians – even though they processed only a fraction of the patient visits.

⁴⁰ For a more detailed discussion of these issues, see Fairbank and Gaumer (2003).

⁴¹ Including the amount spent on polyclinic care, which does include some outpatient specialty care.

⁴² This percentage share for PHC assumes that 50 percent of HII reimbursement for prescription drugs is PHC-related and the rest is spent for inpatients and for treatment of chronic illnesses, like diabetes and hypertension.

While GPs continued to be posted to rural areas (using unchanged deployment incentives embodied in the compensation formula), however, overall use of health centers and health posts has declined across the board. During the 1990s, in fact, the total number of outpatient visits per capita dropped by 60 percent from 3.9 to 1.6, while the number of health centers and health posts declined much less, by about 40 percent. During the same period, while there was significant population decline in rural areas, there developed an established pattern of patients' bypassing health centers and health posts in order to visit specialists at polyclinics in urban areas. Reversing this trend toward bypassing will likely require much more than an increase in funding to peripheral facilities.

In the meantime, those peripheral facilities that continued to be staffed (but not adequately funded for supplies) have reported very low use, which translates into very high average costs. While the 50 urban polyclinics operating in 2002 nationwide had over 2.1 million visits (roughly 170 visits per facility per day), these visits were funded at an estimated operating cost of about Lek 650 million, or Lek 310 per visit. Meanwhile, the 1,946 health centers and health posts provided just over 2.7 million visits (or, roughly, about six visits per facility per day); those visits were financed at an estimated operating cost of about Lek 1.4 billion, or about Lek 500 per visit. The average cost of visits at rural health centers/posts was, of course, much higher (than the Lek 500) on the average, because they averaged only about three visits per facility per day while the typical urban health centers experienced a relatively lower average cost per visit (than the Lek 500) because they averaged 19 visits per day.

The elements of the solution to the complex problems underlying these phenomenon may be relatively easy to identify – more resources for supplies, better and less fragmented management, more incentives to providers to improve quality, more real competition for patients among urban health centers, higher penalties (enforced) for bypassing PHC facilities, etc. But implementing them will be difficult – especially in a timed sequence that will successively reinforce their individual positive effects. The biggest obstacle is the need for more resources, when the demands on current resources are already strained. And, any attempt to reduce numbers of facilities and numbers of staff in order to free up such resources may itself be counterproductive to the effort to raise utilization at peripheral facilities and lower the bypass rate. There are also very strong vested interests devoted to keeping employment in the health sector from dropping, and dedicated even to creating more jobs for health workers. Our analysis of facility-level data on costs and utilization, however, gave insights into how efficiency and productivity could be improved at lower total costs and with higher quality.

4.2 Insights from Analysis of Facility-specific Data

Some insights into the alternatives and possibilities were developed after examining detailed cost and utilization data in four specific facilities (see Section 3). First, it was shown that the four facilities were (in 2002/2003) overstaffed and underutilized, and suffered from the lack of supplies. Relative to the demand for care, the total costs (and average costs) were relatively high, and the amount of time spent by staff in contact with patients was low both in terms of time spent per patient and in time spent as a portion of total worktime available.

Our hypothetical illustration showed how improved clinic management could improve quality, efficiency, and productivity. First, savings could be achieved by reducing the number of physicians on staff (savings could also be realized by reducing nursing staff, but this was not illustrated). Second, utilization could be improved by improving quality of care. This could be done by using some of the savings from reducing the staff to finance the purchase of needed supplies. It would also be accomplished by improving the quality of services by the use of clinical practice guidelines and other quality improvement techniques that would increase the physicians' contact time per patient. More

supplies would make the clinic better able to respond to a broad range of patient needs, and would reduce out-of-pocket spending by patients who otherwise would have to buy the supplies themselves. More physician time spent per patient would be financially costless, as long as spare physician time is available (as there was in the hypothetical illustration).

Taken together, the above reforms could increase utilization by increasing quality, but at reduced costs—leading to an overall reduction in unit costs per service (higher efficiency, higher productivity).

The average costs per PHR*plus* project site given above (for 2002/2003) included the costs (and utilization) of the sites before many of the desired improvements that were envisioned by PHR*plus* for the pilot sites had been made. These improvements included: more and newer equipment, more regular supplies, training of staff in needed areas where staff need upgraded skills in family medicine, and training of appropriate staff to be given responsibility for management. All of these improvements would add some recurrent costs to facility budgets, and may require more flexibility for managers of health centers to control their own staffing and budgets—which would require that they have more autonomy. However, management improvements that could improve staff productivity (as were discussed and illustrated in Section 3) may result in substantial savings in recurrent costs, which could pay for the added supplies many times over. Taken together, all positive changes (e.g., more supplies, improved staff productivity) are also expected to improve the level of quality of the services delivered, and as a result, the utilization of the sites will increase. The net impact on total costs and on average costs of all such positive changes, however, cannot be predicted in advance of the changes taking effect.

The following discussion addresses the questions of how these improvements will be designed and implemented, and what implications they may have for costs and utilization, and, ultimately, for the relation between them as expressed in the average cost per visit.

4.2.1 Financing Added Supplies and Improved Management at the Health Centers

In every health center there is a head doctor who is responsible for management issues. In the urban health centers, once a year the staff fills out a request for supplies that is submitted to the Directorate of Public Health. This request is based on the previous year's request and actual supplies granted, and is not based on level of care, morbidity of the population covered, or any other need-based or demand-based data. Every two or three months they take from this directory the medical supplies needed to offer the services. These supplies are not enough for the level of care offered. Most of the patients have to procure the supplies themselves and then present themselves to the health center to receive the care that requires the supplies.

The rural health centers depend on the local government units, called the commune councils, for their operational funds.⁴³ Here the situation varies depending on the relationship of the doctor with the commune chief, and the level of awareness in the council of the importance of health care. There are no problems disbursing the phone, water, and electricity bills, considering the fact that these are government-operated services that can be paid through inter-budgetary transfers of funds. But funds

⁴³ This involvement of the commune with financing the local PHC facility only extends to its authority to allocate funds for operations and maintenance from the block grant it receives annually for that purpose (and for educational and social welfare purposes) from the Ministry of Local Government and Decentralization.

obligated for medical supplies vary from facility to facility. In the health center in Havaleas, for example, the commune council did not obligate any money for the medical supplies for nine months. But, the commune council was willing to pay for a new shelf when it was explained by staff that it would be needed for the new patient record files created by *PHRplus* assistance.

4.2.2 Financing the Added Costs of Delivering a More Complete Benefits Package

PHRplus did a situational analysis of the four pilot sites in which the current working methods and conditions of these health centers was described. One of the missing links of PHC in Albania was a description of the package of services that ought to be offered by the PHC facilities. Medical doctors have a description of their duties in their contracts with the HII, but, in most cases, they are neither trained nor equipped to perform some of the duties they are given. Nurses have no clear job descriptions and each one follows the tradition of the health center to which they are assigned and the directions of the doctors for whom they work (although they are paid by the MOH, while the doctors are paid by the HII).

PHRplus/Albania currently is preparing a paper (Cook et al., forthcoming) that contains the package of service that the PHC facilities should offer in Albania (see Annex D for the list of services). In order for the staff of the pilot health centers to provide such services, there is need of at least two things: clinical training and new equipment and supplies for the pilot health centers. These are additional costs to the provision of primary health care, the training and equipment being investment costs and the supplies being operating costs.

Annex E provides a list of the equipment and supplies provided for the pilot health centers. The costs of the new equipment and supplies was Lek 1.1 million for the four sites. There were additional costs for training of 18 GPs, 46 nurses, and 10 midwives (in PHC and family medicine), offered by mainly Albanian trainers, English trainers working on volunteer basis, and several American trainers. The training was held once a week at a rented hall in a Berat hotel over several months, and costs included food and transportation costs for those who did not live in Berat, but had to travel from Kuçove or the villages around. The GPs were given one month of training in Tirana at the tertiary hospital after the end of their training in Berat. These additional investments cost about Lek 5.0 million for the training the GPs, and about Lek 2.0 million in training the nurses and midwives.

Only a small fraction of all the above costs could be considered added recurrent costs (i.e., the added supplies) that will be required for sustaining the level and type of service delivery that the personnel have been trained to provide. Personnel costs (and the associated level of productivity in any facility), in any scenario, would continue to dominate the total costs of running a PHC facility, no matter what configuration of services were provided. Under these circumstances, the utilization rate experienced by the facility, combined with the productivity of the personnel, will be the two factors that are most dominant in determining the average cost per visit. The added recurrent costs of improving quality by ensuring adequate supplies will generally be small, and are likely to be more than paid for by improvements in productivity that could be generated by performance-based payment methods and by giving facilities autonomous control over facility management.

4.2.3 Steps being Taken, Under Consideration, and/or Recommended

Among the initiatives needed are some that have already been started, and others that are being planned. Still others are under consideration. A list of the major elements of a solution that would increase utilization at peripheral facilities at a reasonable cost are:

Steps already being implemented by the PHR*plus* project sites:

- ▲ Clinical practice guidelines for commonly seen conditions, in conjunction with training of GPs in family medicine, both designed to improve quality and attract patients to health centers;
- ▲ Improved health information systems that provide data that could improve financing, management, budgeting, and planning for PHC services;
- ▲ Improvements in equipment and supplies to broaden the range of services available;
- ▲ Introduction of continuous quality improvement practices; and
- ▲ Exposure to fundamental practices of managing a PHC facility in preparation for improvements in financing, management, budgeting, and planning that are contemplated, including more autonomy for each facility to determine its own staffing, services, and budgeting, within a given framework of services to be offered.

Steps currently being contemplated for pilot testing by the MOH and the HII:

- ▲ Integration of currently fragmented financing by giving the HII sole responsibility for pooling and disbursing all funds needed by PHC (and other health service) facilities;
- ▲ Focused and unified responsibility for management of PHC facilities through organizational reform of the MOH system so that accountability for performance and quality is clearly centered in one agency (most likely at the regional level);
- ▲ Development and implementation of the simple system of financing, planning, budgeting, and management of PHC facilities that gives both some level of management autonomy to individual PHC facilities (and the possibility of increasing autonomy in the future) and incentives to improve quality and performance in the provider payment method(s); and
- ▲ Enlisting the private sector, and use of some of the payment methods used in the private sector, to enhance the efficiency and competitiveness of public sector services.

Steps currently under consideration as having potentially beneficial effects:

- ▲ Reduction in the level and frequency of informal payments, perhaps by introducing modest user fees that encourage appropriate referral patterns and reinforce the incentives given to providers for performance and quality improvements; and
- ▲ Large increases in the role of social health insurance financing in the overall financing of health services, including secondary and tertiary care, through the HII.

Each of the above steps, if designed and implemented independently of the others, is likely to have little effect on the interrelated and worsening PHC problems of low quality, low use, and high average cost. But an effort that seeks to coordinate and sequence, in a concerted and deliberate fashion, all of the above steps holds great promise for raising quality, raising utilization, and reducing average costs—and ultimately improving the health services available to the Albanian people. In the long run, improved health services should have the consequence of improving its overall well-being and its health status as well.

Annex A: Averaging Aggregated Costs and Units of Service in Albania

Problems in Interpreting Average Costs Based on Aggregated Costs and Use

Section 3.1 of this paper observed that it is difficult to attribute much significance (for purposes of assessing current policy, or for making new policy) to average cost figures (in any particular year) arrived at simply by dividing total costs and associated utilization aggregated across many facilities. In such a circumstance, it is difficult to know how any variances in the costs across facilities (in the numerator) relate to variances in utilization by facility (in the denominator). Variances of both kinds are masked within the aggregations made.

For example, one could sum up the total costs of the four PHR*plus* project sites during the period in question, divide it by the total utilization at the four sites and come up with an average for those four sites: it would be Lek 13,784,226 for 49,305 visits, yielding an average cost of Lek 280 per visit. This reflects a weighting both of the numerator and of the denominator across the four sites, and is a measure of the central tendency (for just those four sites) in a range between Lek 814 per visit (at Lapardha) and Lek 163 per visit (at Havaleas) – both of which are rural facilities at which utilization was only about one-quarter of what it was at the urban facilities (where the average costs were much closer to the aggregated figure of Lek 280 per visit).

If one were to have developed a series of aggregated average cost figures over time, however, and were able to see differences between the trends in the numerator and those in the denominator, particularly if there were pronounced differences in these trends as between urban and rural areas, then there would at least be some policy-related significance imparted to the yearly figures for average cost. For example, if, over the years, total costs rose modestly (e.g., in line with increased staffing levels, or with increased average compensation provided at constant staffing levels) while utilization dropped significantly (as it has from 3.9 visits per person to 1.6 visits per person since 1989), one could easily conclude that the resulting rapid rise in average cost per visit could be attributable mostly to changes in the denominator (total use) and not to changes in the numerator (total costs). While we can present no evidence in this paper of such a trend at this time, it is probable that such a trend has occurred. Having made the above caveats, however, that one should be cautious in interpreting a one-off estimate of average costs based on aggregated data, it is somewhat useful to show how the most recent data (aggregated for 1999) compare to the data just presented for the PHR*plus* sites for 2002/03.

Annex B: Methods Used in Defining, Gathering, and Processing Cost Data

In July 2002, the PHR*plus* Project Team established a Health Information System in the four pilot health centers in Berat and Kuçove. The basis of this system is a patient encounter form that can be processed by being scanned so that utilization data can be collected and analyzed facility by facility for purposes of planning and managing the allocation of resources. (Samples of various versions of the form is included as Annex F.) Some cost information was also collected from each facility in order to facilitate linkage of use data with cost data. The following paragraphs explain the methodology used in the cost collection.

All the costs incurred were classified into four categories of direct costs (indirect costs were not included because it is impossible to derive a reasonable estimate from available data:

- ▲ space;
- ▲ equipment;
- ▲ personnel; and
- ▲ supplies.

The data in each of these categories was defined and collected as follows:

Space

There are two main space costs: the capital costs of building the facility (which, for completeness, can be included in recurrent costs as depreciation) and the housekeeping costs (utilities and maintenance). Currently almost all the health facilities are the property of the Ministry of Health, therefore, there are no such capital costs currently incurred. The common way of including capital costs as part of the full economic costs of production is to include an estimate of depreciation of those capital costs of the facility and of depreciation or appreciation of the land.⁴⁴ As a proxy for these costs, we used an estimate of the going market rental price for the facility.⁴⁵ Each of the four facilities has a different rental price per square meter, because of their varying sizes of the facilities, their locations, and their conditions. The rental price was established after discussions with the staff and other residents in the area about the area rental market for similar space. In one of the health centers

⁴⁴ Such depreciation/appreciation occurs during normal recurrent operations. After many years, despite adequate maintenance (and much earlier in its absence), any building would have to be replaced, just as if it were outworn equipment. Explicit allowance for the developing need for such replacement costs should be included in the calculation of recurrent costs of operation.

⁴⁵ This is, in theory, an overestimate of depreciation, because it would include the profit to the landowner – an expense that would not be incurred if the government owned the facility. If the facility is, in fact, rented, however, its full rental cost is a recurrent cost of operations, and the rent would presumably include repair costs that are the owner's responsibility.

(Lapardha), one of the rooms of the health center is currently rented out to a dental private practice. That established price was used for the rest of the facility. The way the space costs are allocated is fairly direct. All the space in the service rooms is allocated according to the services offered there, and the common spaces, like bathrooms and hallways and so on, are considered overhead costs and automatically allocated by the system according to services rates.

Utility costs

The utility bills are collected monthly. The health center in Lapardha does not have water pipes, but has a well instead. In this case, there is no expenditure for water. Telephone bills and electric bills are relatively high. All the utility expenses are considered overhead costs and are allocated among the types of services according to the proportion accounted for among the total.

Maintenance and repair costs

Repair costs should be included only in those facilities that are owned by the government. If the government rents them from a private party, typically the repair costs should be the responsibility of the owner. (No repair costs were included in these calculations.) As for maintenance, the major component of maintenance costs is the cleaning expenses made up almost entirely of janitors' salaries and the cleaning supplies expenses. One health center does not have a janitor; the nurses do the cleaning (so there are no added costs for cleaning). The bills are collected at the Directory of Primary Health care in Berat and Kuçova.

Equipment

All the equipment in the health centers is registered according to their replacement costs. Then a simple depreciation calculation gives the recurrent cost of its use.

Personnel costs

Personnel costs comprise the total of the the monthly salaries of the staff of each health center, plus the contributions made on behalf of the staff to the social insurance fund. The data for nurses was collected by the *PHRplus* staff at the Directory of Public Health in Berat and Kuçova, and for doctors from the Health Insurance Institute regional director. The average time spent per encounter was calculated from data made available through the patient encounter form, which recorded the time put into a service by the doctor and/or nurse. These data made possible the creation of working models for allocation of staff time and allocation of all costs per service.

Supplies

In the beginning, to measure the use (and cost) of supplies during a particular month, we registered what was in the inventory of supplies on the first of the month and then compared it with what is there on the first of the next month, taking into account whatever was purchased along the way. But because there is virtually no funding to replenish supplies, this method did not work very well. Because the health centers now are not allocated sufficient funds for supplies, they charge the patients for the use of the supplies, and immediately replace whatever they use. Considering that we are not concerned with who is paying for what, but are only trying to figure out how much the services cost at the current level of quality, we tried to capture the use of those supplies even though they were paid for by the patients. Therefore, there is a notebook by the supplies cabinet, in which the nurse registers every item of supply used during the month. The estimated cost of the total use is used as the costs of supplies associated with the level of utilization at the facility, no matter how such

supplies were funded. Data on office supplies, such as registers, prescription books, etc., were supplied by the regional office of HII.

Annex C: Health System Data for PHR*plus* Site Areas

Table C-1. Health System Data for PHR_{plus} Site Areas – Compared to Tirana and Nation

(Source: "Health Map of Albania," MOH Dept. of Human Resources, Albania 2002 [some data deducted from data provided in source])

	Population	Population Density (per sq km)	Total MDs	Total MDs per 100,000	Total GPs	Total GPs per 100,000	Total Nurses, Midwives	Nurses, Midwives per 100,000	Health Centers	Health Centers per 100,000	Health Posts	Health Posts per 100,000	Hospital Admissions	Hospital Admissions per 100,000
	2000	2001	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Berat	140,907	137	133	104	55	39	481	341	18	13	47	33	11,064	7,852
Kuçove	40,237	423	38	107	19	47	99	246	9	22	14	35	1,593	3,959
Skrapar	44,527	39	52	174	18	40	247	555	10	22	94	211	1,326	2,978
Tirana	497,793	423	1,280	245	309	62	2,194	441	63	13	82	16	72,953	14,650
Albania	3,403,334	98	4,325	127	1,557	46	12,570	369	580	17	1,505	44	266,381	7,827
Tirana as % of Total	15%		30%		20%		17%		11%		5%		27%	

Notes: Health map says that health posts in Skrapar went from 58 in 1998 to 94 in 2000, and that midwives/nurses went from 718 in 1999 to 247 in 2000.

Skrapar's "health posts per 100,000" is the highest in the country for 2000.

Population figures were deducted from resources (per 100,000) rates.

Data above that gives "total MDs" and "total MDs per 100,000" are labeled in source as "general practitioners".

(The same source gives data on "general practitioners" as given above. Thus, source probably means all physicians, not just GPs.)

Recent evidence is that the population of Tirana has risen considerably, and that of Albania has dropped somewhat (towards 3 million) since 2000.

Annex D: List of Services for PHC Facilities

Primary Health Care Center Pilot Clinical and Management Support Provided by PHR*plus*

1. Clinical Services

1.1 Adult Care:

Basic Diagnosis and Treatment of Illnesses and Diseases

This category covers the most common illnesses and diseases of adults accessing services at the Primary Health Care level. Clinical Practice Guidelines (and an accompanying Quick Reference page) have been developed for the disease categories listed below. They were chosen because of the relative frequency with which they are seen at the PHC level.

- ▲ Hypertension
- ▲ Chest Pain
- ▲ Angina / Ischemic Heart Disease
- ▲ Heart Failure
- ▲ Diabetes
- ▲ Urinary Tract Infections
- ▲ Anemia
- ▲ Asthma / COPD
- ▲ Acute Low Back Pain
- ▲ Depression
- ▲ Fatigue

Disease categories suggested for training and for the development of Clinical Practice Guidelines and Quick Reference summary sheets in 2004 include:

- ▲ Communicable disease treatment and reporting
- ▲ Respiratory infections

- ▲ Epigastric pain
- ▲ Arthritis

1.2 Pediatric Care:

Basic Diagnosis and Treatment of Illnesses and Diseases

This category covers the most common illnesses and diseases of adults accessing services at the Primary Health Care level. Clinical Practice Guidelines (and an accompanying Quick Reference page) have been developed for the disease categories listed below. They were chosen because of the relative frequency with which they are seen at the PHC level.

- ▲ Acute tonsillitis
- ▲ Bronchiolitis
- ▲ Lower respiratory tract infections
- ▲ Otitis media
- ▲ Diarrhea
- ▲ Febrile convulsions
- ▲ Temperature management

Disease categories suggested for training and for the development of Clinical Practice Guidelines and Quick Reference summary sheets in 2004 include:

- ▲ Common dermatology problems
- ▲ Parasites

Well Child Care

A clinical practice guideline and quick reference has been developed for:

- ▲ Childhood Growth and Development Monitoring

The development of a quick reference / summary sheet is proposed for 2004:

- ▲ Immunizations / Vaccinations

1.3. Women's Health and Reproductive Health Care:

For Women's Health and Reproductive Health, PHR*plus* has developed CPGs for:

- ▲ Antenatal Care

- ▲ Labor & Intrapartum
- ▲ Postnatal Care
- ▲ Clinical Diagnosis and Treatment of common problems during Pregnancy and Delivery

Trainings in female anatomy, sexually transmitted diseases, family planning, prevention screenings (breast exams, Pap smears), were done for midwives at the pilot centers in conjunction with the Community Campaign. Additionally, training was done in cooperation with the JSI SEATS program in the areas of family planning, sexually transmitted diseases, and breastfeeding and prenatal care. Midwives work with protocols developed by JSI.

Quick Reference Guides will be developed in 2004 for the following categories:

- ▲ Normal Pregnancy
- ▲ Normal Delivery (only applies to the Lapardha Center)
- ▲ Family Planning

1.4. Emergency Care:

As part of the Continuing Medical Education program *PHRplus* provided comprehensive materials and training in:

- ▲ Initial Management and stabilization of emergency problems

1.5. Preventive Care:

Preventive Care is a topic that is not currently emphasized in Primary Health Centers in Albania. The model sites will attempt to improve Prevention methods including providing links to health education promotion material sources and trainings. Areas to be covered include:

- ▲ Smoking Prevention
- ▲ Health education / disease prevention programs
- ▲ Hygiene and clean practices for school children

1.6. Mini-Laboratory Services:

If equipment is available for use in the health center and if facility usage would warrant it, a mini-laboratory is recommended. The minimal services that should be available at the PHC level should include:

- ▲ Urine Dipstick
- ▲ Whole blood Glucose testing

If there is a microscope in the facility, the labs could be expanded to include:

- ▲ Complete Urinalysis
- ▲ Wet Preps

If there is a centrifuge in the facility, the labs could be expanded to include:

- ▲ Hemoglobins
- ▲ Hematocrits

2. Facility Management

2.1 Health Center Operations Manual:

- ▲ Scope of Service
- ▲ Job Descriptions
- ▲ Policies and Procedures
 - △ Patient Medical Records
 - △ HIS
 - △ visit encounter form
 - △ report review and use
 - △ Patient flow procedures
 - △ Inventory and supply maintenance
 - △ Equipment monitoring and maintenance
 - △ Other
- ▲ Continuous Quality Improvement Plan
- ▲ Clinical Standards

2.2 Continuous Quality Improvement:

- ▲ Health Center QI Plan
 - △ Collection and use of data
 - △ Encounter form data
 - △ Medical record review
 - △ Patient satisfaction
 - △ Special clinic projects related to quality
 - △ Ongoing monitors
 - △ Refrigerator temperature measurements
 - △ Monthly meetings
 - △ Quarterly reports

2.3 Coordination and Oversight

- ▲ HIS / TA Office Advisory Board

- ▲ Pilot Quality Improvement Committee

Annex E: List of Equipment and Supplies for PHC Facilities

Table E-1. Medical Equipment Specifications

Line Item	Quantity	Unit Measure	Mfr./Part No./Description	Unit Price	Price Extension
1	13		Stethoscope – stainless steel switchable dual head chest piece, thick PVC “Y” type tubing	\$ 7.00	\$ 91.00
2	4		Sphygomanometer – manometer, range 0-300 mm/Hg, adjustable velcro cuff, complete with zippered case (wall units – include wall mounting) Adult BP cuff unit	25.00	100.00
3	4		Sphygomanometer – Adult BP cuff	12.00	48.00
4	4		Sphygomanometer – Pediatric BP cuff	15.00	60.00
5	6		Thermometer – simple thermometer, single plastic cases – oral thermometer	1.00	6.00
6	6		Thermometer – simple thermometer, single plastic cases – rectal thermometer	6.00	36.00
7	13		Hand light – penlight with pocket clip	8.00	104.00
8	5		Mental tongue depressor – stainless steel	4.00	20.00
9	2		Otoscope – economic, battery operated, 2.5 x magnification, standard illumination and reusable specula, includes spare light bulbs	65.00	130.00
10	2		Glucometer – with additional strips and easy refills	65.00	130.00
11	2		Adult scale – floor scale with height rod capacity of 150 kg, graduation 100g	57.00	114.00
12	2		Instrument tray, complete set for microsurgery	27.00	54.00
13	2		Suture set – standard	65.00	130.00
14	2		First aid/CPR kit – must include standard emergency equipment including reanimation silicon bags for adults (260ml) and child (500ml)	450.00	900.00
15	2		IV stand – foldable base with 5 castors, adjustable	35.00	70.00
16	2		OB delivery kit – must include forceps, henostatic needs, sterile blades and umbilical clamps	295.00	590.00
17	2		Pelvinometer – simple stainless steel	40.00	80.00

18	4		Vaginal speculum – cusco vaginal speculums with central screw, one each of small, medium, large and virgin sizes	65.00	260.00	
19	2		Aspirator infant – simple aspirator appropriate for infant oral suction	130.00	260.00	
20	2		Resuscitator set for neonate – reanimation silicon bags – infant 240 ml, neonatal guedel canulas	140.00	280.00	
21	2		Bacinelle – stainless steel, 200mm, 550ml	6.00	12.00	
22	2		Fondoscope – fetal stethosope	4.00	8.00	
23	2		Baby scale – capacity 13 kg, graduation 10 g	43.00	86.00	
24	2		Instrument boiler with support – stainless steel, body, lid and perforated internal tray, hooks to left internal tray, closed with joint handles	45.00	90.00	
25	6		Medical consultation beds – constructed from chrome – plated square steel tube, fully adjustable headrest, covered with washable plastic	195.00	1170.00	
26	4		Biohazard disposal containers, standard table top	38.00	152.00	
27	4		Measuring tape for head circumferences – standard	4.00	16.00	
28	8	Boxes	Rubber gloves – standard	9.50	76.00	
29	100	Pkg	ORS – standard	12.00	1200.00	
30	12	Bottle	Urine dipsticks	55.00	660.00	
31	12	Bottle	Glucose dipsticks	50.00	600.00	
32	1		Microscope	490	490	
33	2		Centrifuge	490	980	
Total					Lek	1,107,369
					\$\$	9,003.00

Annex F: Patient Encounter Forms

SISH SHQIPERI **PATIENT ENCOUNTER FORM**

Health Center: _____

Physician: _____ Nurse: _____

Visit Date: D M Y

Patient's Surname: _____ Initials: _____

Length (<10', 10'-20', >20') _____

First Visit _____

Home Visit _____

Distance (< 1, 1-5, >5 km) _____

Sex _____

Married _____

1 = Non - Insured
2 = Insured Active
3 = Insured Non-Active

Reason for Visit :

- Acute
- Chronic
- Antenatal
- CheckUp
- Family Plan.
- Immunisation
- Emerg./ Delivery
- Well Baby
- Injection
- Wound Care

Referrals :

- Emergen. Room
- Peds Spec.
- Obst./Gynecolog
- Radiology
- Pulmonary
- Cardiology
- Other Specialists
- Family Doctor

Diagnosis

	1 - st	2 - nd	3 - rd
01. Blood Disorders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
02. CardioVascular	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
03. Endocrine System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
04. Gastro - Intestinal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
05. Central System(F)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
06. Genital System (M)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
07. Urinary System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
08. Communic. Diseases	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
09. Mental Disorders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. MusculoSkeletal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Nervous System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Obstetrics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Pulmonary System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. EENT System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Skin Disorders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Signs & Symptoms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Routine Care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Laboratory Analysis :

	Blood	Urine	Sputum	Stool	Other
Bacteriology	<input type="checkbox"/>				
Chemistry	<input type="checkbox"/>				
Parasitology	<input type="checkbox"/>				
Immunology	<input type="checkbox"/>				
Hematology	<input type="checkbox"/>				

Medications Prescribed

	1 = oral	2 = injection	3 = topical	4 = supposte
Anti-Infecive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CNS/PsychNeuro	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cardiovascular	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anti-Hypertensive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pain Meds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dermatologic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anti-inflammatory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Allergy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Endocrine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vitamins/ Minerals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cough	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G / I Therapies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Family Planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

--

ENCOUNTER FORM

Visit Date: _____

Dist.	PCH	Fidr.	Doctor	Nurse

Patient ID #

Birthdate: _____

Sex: M F

Insurance: Y N

Married: Y N

Home visit: Y N

Referral: Y N

Patient Name: _____

PRIMARY REASON FOR VISIT:

- 1. Acute
 - 2. Chronic
 - 3. Emergency
 - 4. Follow-up
 - 5. Check-up
 - 6. Other
- | |
|------------------|
| Family Planning: |
|------------------|
- 7. Contraceptives
 - 8. Advice only

- | |
|----------------|
| Prenatal Care: |
|----------------|
- 9. 0 – 13 weeks
 - 10. 14 – 28 weeks
 - 11. < 28 weeks
 - 12. after birth
- | |
|-----------------|
| Well Baby Care: |
|-----------------|
- 13. Well Baby Visit

Note: Please include a special/procedure code for the type of feeding for each well baby visit

Diagnosis

1-st _____

2-nd _____

3-rd _____

Procedure

HIS Encounter Form Procedure

- 1) One encounter form should be completed for each patient entered in a health center registry. There are times when a patient is entered in several registries, for example the pathology registry and the injection registry. Two encounter forms should be completed – to match the information in the registry.
- 2) Enter the code for the district
 - a) 02 for Berat
 - b) 17 for Kucova
- 3) Enter the code for the health center:
 - a) 01 for Lapardha
 - b) 02 for Muzakaj
 - c) 03 for Donika Kastrioti (Kushtrim)
 - d) 04 for 28 Nentori (22 Tetori)
 - e) 05 for 10 Korriku (30 Vjetori)
 - f) 06 for Jani Vruho
 - g) 07 for Clirim
 - h) 08 for Uznove
 - i) 09 for Women’s Consulting Room in the Policlinic
 - j) 10 Women’s Consulting Room near Muzakaj
 - k) 01 Havaleas
 - l) 02 Llukan Prifti
 - m) 03 Tafil Skendo
 - n) 04 11 Janari
 - o) 05 Women’s Consulting Room in Kucova
- 4) There is a folder for storing encounter forms near each registry. Please make sure the forms are in the right folder, which matches the registry. There is a number on the folder. Enter this number on the encounter form.
- 5) For a physician visit, enter the personal codes for the doctor and the assisting nurse
- 6) For a nurse visit, enter only the code for the nurse
- 7) Enter the date of the visit. Be sure to include a zero for days 01-09 and months 01-09. Use just the last 2 digits for the year.
- 8) Enter the patient code: **Note:** this code is the **same code used by HII**. All patients will have an HII code in the future. If the patient does **not** have an HII number, which may be the case in a village, leave the code blank.
- 9) If the patient has an insurance number but did not bring his/her booklet, please try to find the number in the list of names and numbers in the center. Also, please instruct the patient to always bring his/her booklet when he/she comes for a visit. If after trying everything possible and it is not possible to determine the patient’s number, leave the code blank.
- 10) Write the patient’s name
- 11) Enter the birthdate of the patient with 2 digits for the day, 2 digits for the month, and 2 digits for the year. Be sure to include a zero for days 01-09 and months 01-09. **NOTE:** If a patient is 100 years old or greater, write in four digits for the year of birth.
- 12) Check a box for the sex of the patient
- 13) Check a box to indicator whether or not the patient has Insurance.
- 14) Check a box for the marital status
- 15) Check a box to indicate whether the visit was done at the patient’s home
- 16) Check a box to indicate whether or not a referral was made.

- 17) Check only one of the 15 reasons for visit – the primary reason.
- a) Physicians generally use the first 5 reasons for visit. A diagnosis code must be added when these visits are checked. If the physician does not know the diagnosis, then the code “000” should be put in the diagnosis code section.
 - i) **Acute** (1) means the first visit for an acute illness.
 - ii) **Chronic** (2) means a routine visit for a chronic condition such as diabetes or hypertension.
 - iii) **Emergency** (3) means a visit where something happened suddenly requiring immediate intervention, such as stabilization for transfer after an accident. Note: this applies more to rural sites than urban, since emergency cases normally go to the hospital in the cities
 - iv) **Follow-up** (4) means a visit needed to follow-up after an acute or emergency visit, or after a chronic visit if a problem was identified that needed follow-up
 - (1) For example, if a child has tonsillitis and need to come for a check-up after 24 hours, this is a “follow-up visit”
 - v) **Check-up** (5) means a preventive care visit. This includes a routine history and physical, screening for diseases, advice about lifestyle.
 - b) Nurses generally use the “**other**” category when a patient comes only for a procedure (injection, wound care, etc) and does not see the physician for one of the other visit types. Mark the visit type “**other**” (6) and always enter a procedure code. Note: Procedure codes are attached as annex 1.
 - c) Nurses usually do the visits for family planning, prenatal care and well baby care, although these might be done by a physician as well.
 - i) **Contraception / Advice** (7) means a visit where reproductive health information and counseling are given and where contraceptive methods are given to the patient. See annex for procedure code to use for each type of contraceptive.
 - ii) **Advice Only** (8) means a visit for family planning where only reproductive health information and counseling are given
 - iii) **For prenatal care**, (9, 10, 11, 12), mark the number of weeks pregnant or mark that it is a visit made after delivery. Enter procedure code 1 if this is the first visit during the pregnancy. Enter procedure code 2 if this is a subsequent visit. If there are any pathologies present, enter the pathology as a procedure/special code. If a referral is made to the specialist, check “yes” under referral, and in addition, add a special code (reason for referral) in the procedure code section.
 - iv) **The category for “well baby care”** (visit type 13) is intended for use by nurses doing routine well baby care. In addition to marking the visit type, add a special code in the procedure section to indicate the type of feeding. In addition, if the nurse refers the child to the doctor, a code should be added to indicate the reason.
- 18) Note: A diagnosis code should always be included for visit types 1-5. The diagnosis codes should match those used for HII prescriptions. Use code 000 if the diagnosis is pending or if the patient is healthy.
- 19) Procedure or special codes will be changed frequently. Please make sure you have the most recent list.
- 20) Once complete, put the encounter form in the folder designated for the specific registry.
- 21) NOTE: If there is a problem with a form, such as information missing or if the writing is illegible, the form will be rejected and must be corrected. Rejected forms will be returned to each health center. The center chief (or designee) is responsible for distributing the incorrect forms to the appropriate physician or nurse. The physician or nurse should correct the form and put the corrected form in his/her encounter form folder with their other completed forms.

Procedure Codes & Special Codes Used in the “Procedure” Section

Codes used for visit type 6 (Other)

Injection codes:

- 100 Intramuscular injection antibiotic
- 101 Intramuscular injection other
- 102 Intravenous injection
- 103 Subcutaneous injection

Wound care procedure codes:

- 300 Wound treatment (simple)
- 301 Surgical Wound treatment

Codes for maternity units:

- 050 Delivery
- 051 Control after delivery

Codes used in special circumstances:

- 500 = blood pressure
- 501 = referral only

NOTE: These codes would be used only if it is the only reason for a visit - to explain why the “Other” category was marked. It wouldn't be marked for blood pressure taken during another type of visit or a referral made during another type of visit.

Codes used for Family Planning – Visit types 7 & 8

- 035 Pills
- 036 Depo-Provera Injection
- 037 IUD
- 038 Condom
- 039 Emergency contraceptive
- 040 Health Education
- 041 Health Education with clients in groups

Codes used for prenatal visits (types 9,10, 11, 12)

- 001 First prenatal visit
 - 002 Subsequent prenatal visit
- Note: Either 001 or 002 must be included for any of these visits

Additional codes used during prenatal visits when appropriate:

- 003 Pregnancy greater than 38 weeks
- 010 Ultrasound examination during pregnancy
- 011 First Dose Antitetanus Vaccine
- 012 Second Dose Antitetanus Vaccine

Codes for Pregnancy Pathology:

(these codes are for use only by nurse-midwives, as doctor will use ICD9 international classification of diseases)

- 015 Preeclampsia/ Eclampsia
- 016 Anemia during pregnancy

- 017 Threatened abortion
- 018 Multiple pregnancy suspected or diagnosed
- 019 Rhesus Iso immunization in ongoing or previous pregnancy
- 020 Uterine Bleeding during pregnancy
- 021 Pelvic mass
- 022 Diastolic pressure more than 90 mm Hg
- 023 Pregnant woman with insulin dependent diabetes mellitus
- 024 Pregnant woman with a renal disease
- 025 Pregnant woman with cardiac disease
- 026 Urinary tract infection during pregnancy
- 027 Cervical and vaginal infections during pregnancy
- 028 Sexually transmitted diseases during pregnancy
- 029 Using of abusive substances, including alcohol
- 030 Other pregnancy pathology

Codes for Gynecological Diseases (These codes are used by nurses, midwives in woman wellness centers when they visit a woman who suffers from a gynecological illness (Type 6 – other):

Upper genital tract infections:

- 060 Endometritis
- 061 Parametritis
- 062 Other upper genital tract infection

Lower genital tract infections:

- 063 Vaginitis (includes yeast infection, or mycotic colpitis)
- 064 Cervicitis
- 065 Other lower genital tract infection

Other

- 066 Sexually transmitted infection (not pregnant)
- 067 Infertility (includes sterility)
- 068 Menopause
- 069 GYN Tumors

Codes used for well baby care, visit type 13, 14, 15:

Immunization Codes:

- 210 BCG
- 211 Hep.B-1
- 213 DTP 1
- 214 Polio 1
- 215 Hep B-2
- 216 DTP 2
- 217 Polio 2
- 218 DTP 3
- 219 Polio 3
- 220 Hep B-3

- 221 Fru/Rub –1
- 222 DTP R-1
- 223 Polio R-1
- 224 Fru/Rub –2
- 225 R- DT
- 226 R- Td
- 227 Polio R-2

Additional codes for children consultancy

Type of Feeding:

- 240 Only breast feeding
- 241 Mainly breastfeeding (includes some water, juice)
- 242 Breast milk + formula
- 243 Breast milk + cow's milk
- 244 Formula only
- 245 Cow milk

Reason for referral:

- 246 Anemia
- 247 Rickets
- 248 Underweight
- 249 Developmental problems

Other:

- 250 Control prior to immunization
- 251 Control after immunization
- 252 Control for sick children

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