

TECHNICAL REPORT NO. UKR-6

**L'viv Intensive Demonstration Site:  
A Tool Kit for Implementing User Fees  
and Decentralized Management  
Accounting Systems in City Hospital No.1**

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**November 1995**

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## ACRONYMS AND ABBREVIATIONS

ALOS Average Length of Stay  
CH1 City Hospital No. 1  
ENT Ear, Nose, and Throat  
ICD9 International Classification of Diseases, Version 9  
IDS Intensive Demonstration Site  
RVU Relative Value Unit  
ZRP *ZdravReform* Program

The local currency is the kupon: 185,000 kouvons = US\$1 (October 1995)

## EXECUTIVE SUMMARY

The *ZdravReform* Program (ZRP) was introduced to Ukraine in July 1994 and began work in the L'viv and Odessa Intensive Demonstration Sites in May 1995. L'viv Oblast has as one of its key activities to work with two health care facilities, City Hospital No. 1 (CH1) and L'viv Adult Polyclinic No. 2, to completely overhaul their payment and management systems. Under this particular task, the ZRP team worked with these facilities to revive, refine, and expand their use of user fees and to institutionalize related systems of management accounting.

This report briefly describes and documents, in the form of a general manual for application in other health care facilities, the tools and techniques of user fee financial management and cost and budget management currently being implemented in City Hospital No. 1 (CH1), a health care institution consisting of a 240-bed hospital, four polyclinics, and two family medicine centers. This document is one of a series of four reports associated with this task. The other three reports include a brief trip report by Wouters and Else (November 1995)<sup>1</sup>, a separate tool kit on management accounting techniques being implemented in L'viv City Polyclinic No. 2 (Else, November 1995)<sup>2</sup>, and a manual with questionnaires on internal control and cash management for user fees (Else, November 1995)<sup>3</sup>.

### *Background*

Three recent and important health reforms in L'viv Oblast have heightened the need for improved budget and cost management capacities in health care facilities. First, in July 1995, CH1 obtained facility-specific approval to implement user fees, which it did for some of its services beginning on October 1, 1995. Second, on October 15, 1995, the L'viv Oblast Health Administration issued a decree that changes rayon-level budgeting to per capita global budgeting, effective January 1, 1996. Under the decree, rayons will have substantial flexibility in how they allocate their health budget to individual facilities. This decree also permits the implementation of user fees for those services above the oblast-guaranteed minimum package, and eliminates oblast-level taxes on user fee revenues. Third, the L'viv City Health Administration has proposed changing the traditional line item budgets for each of the nonspecialist hospitals and polyclinics to a per capita-based global budget, which would allow substantial flexibility in how resources are used. (CH1 already has a special waiver releasing it from some of the usual constraints under line item budgeting.) In addition to these recent reforms, in 1994, patients in Ukraine were given legal authority to choose their own physicians and health care facilities, creating competition among health care providers.

### *General Approach to Development of Financial Management Techniques*

In developing the tools and techniques for pilot health care facilities in Ukraine, the ZRP team considered several aspects of the facilities' current situation. The major ones include (a) a long history of centralized budgeting; (b) enthusiastic and capable, but limited numbers of, senior economists; (c) an immediate need for manual systems because of a lack of computers (although eventual computerization is expected); (d) the availability of substantial statistics used primarily for external reporting; (e) inconsistently used coding systems for diagnoses (International Classification of Diseases, Version 9, or ICD9), and the absence of coding systems for procedures; (f) preexisting patient classification systems based on "complexity groups" that include the set of diagnoses treated in each department, grouped according to average

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<sup>1</sup> A. Wouters and B. Else Lviv Demonstration Site: Implementing User Fees and Related Management Accounting Systems. Trip Report, November 1995.

<sup>2</sup> B. Else Instituting Improved Cost Management and Internal Control Systems and Reviving User Fees at Polyclinic No.2 in L'viv, November 1995.

<sup>3</sup> B. Else Internal Control and Cash Management Manual and Questionnaires. November 1995

length of stay; (g) a preexisting system of procedure groups categorized within departments according to the labor time required to conduct the procedures; and (h) an unclear legal framework on issues relating to cash management, taxation, other reporting requirements, and the specification of a minimum set of guaranteed free services.

As health care facilities gain financial autonomy, strengthening their financial information system to track budgets by major subunits and departments within those subunits can improve the efficiency and effectiveness with which resources are used. Senior management can follow up on such an enhanced financial information system with the creation of decentralized centers of management responsibility. In many countries, it has been found that those directly responsible for implementing a specified activity or program often know the most about identifying ways to allocate resources more efficiently.

As budgets are decentralized, management should develop budget performance reporting systems. Actual budgets should be compared with actual expenses and should also be linked to performance indicators that measure volume of activity (overall and by type of service), productivity of inputs (especially labor), costs per service, and quality of care. Improved cost management (that is, tracking actual rather than just standardized costs) follows hand in hand with improved budgeting. Cost accounting techniques can be used to support the preparation of separate budgets and budget performance reports required for decentralizing budget responsibility. In addition, cost accounting techniques can be applied to monitor appropriate costs under a system of user fees.

### *Recommendations*

As a result of ZRP's assistance, several demonstration activities in budgeting, cost management, and financial management for user fees have been initiated at CHI. The summary of recommendations below reflects the experiments currently under way.

1. *Global Budgets and Centers of Budget Responsibility:* Health care facilities should consider breaking down global facility budgets by major institutional subunits and departments or cabinets within those subunits. Such information needs to be maintained on a systematic and regular basis (for example, monthly or quarterly). As noted above, senior management should then follow up on such an enhanced financial information system with the creation of decentralized centers of management responsibility. Budget performance reports should be developed for each area of budget responsibility. These reports should link financial, volume, productivity, and health status information, and be useful for maintaining accountability under a system of decentralized budget responsibility.
2. *Cost Management Reports:* The selection of cost accounting tools depends on how the cost information is being used. More or less detail may be required in how overhead and intermediate costs are allocated and how department-level procedure-level costs are calculated. It is recommended that in a health reform context in which (a) user fees are designed to recover partial rather than full costs, (b) regulations require that prices be set for each medical and ancillary service separately, and (c) management is attempting to decentralize budget responsibility, that cost management reports emphasize departmental procedure-level costing at a level of detail and accuracy commensurate with the department's ability to control or influence its costs. Less detail is likely to be necessary in carrying out a multiple step-down allocation of overhead and intermediate costs to medical departments. Economists should work with medical staff to begin to link cost management efforts with clinical outcome measures, even if those clinical outcomes are general-level observations. The two go hand in hand, as evidenced by clinical pathways and medical guidelines being promoted in other activities within the pilot facilities.
3. *Training in Relevant and Feasible Financial Management Tools:* Training in budget and cost management and financial management tools for user fees through a combination of workshops, manuals, and collaborative technical assistance is necessary to guide health care facility managers. Such training will assist managers in the implementation of sustainable new methods of management accounting that are appropriate for current decision-making needs.

4. *Defining Services for User Fees:* Policymakers should facilitate the rapid definition of the defined benefit package of free services guaranteed by the oblast so as to promote a clearer definition of available user fee opportunities.
5. *Legal Framework for Setting Prices:* Policymakers should minimize legal constraints on rules for setting prices, both in terms of formulas for setting the level of prices, and in terms of how services can be bundled (price per individual services or price per package of services).
6. *Pilot Site Waivers:* Policymakers should offer pilot facilities legal waivers to experiment with new forms of user fees.
7. *Taxation:* Policymakers should reduce both national- and oblast-level taxes levied on user fee revenues. Taxation policies should be clearly disseminated to all health care facility managers and tax inspectors.
8. *Calculating Costs:* Under the current legal framework and under a system of partial self-financing, the basic technique of establishing prices based on department-level operating costs is adequate; however, some refinements should be considered. In particular, the use of cost accounting methods based on relative value unit methods should be increased to estimate the actual costs of a more detailed set of services and procedures.
9. *Setting Prices for Self-financing:* Health care facilities should soon realize that in light of current budget constraints, self-financing will become increasingly important. As health care facilities attempt to become further self-financed, prices at a minimum should cover variable costs and taxes. As patients become willing and able to pay, prices should cover variable costs, taxes (value-added, profit, and other special taxes), and fixed costs.
10. *Use of Revenues for Salary Bonuses:* It is important that salary bonus systems associated with sharing revenues from user fees be kept in line with the need to first cover variable costs and taxes. Clear and transparent formulas or guidelines should be set for how the health care staff share these revenues among themselves; otherwise, favoritism may occur. In general, salary bonuses should compensate staff according to the volume of work they do (actual provision of service rather than simply the generation of referrals within the institution), the quality of their work, their role in attracting new patients, and their commitment to support the efforts of the professionals in their department and/or facility.
11. *Use of Revenues for Nonpersonnel Material Costs:* It is important to distribute significant portions of the revenues to the specific departments implementing user fees so that they can improve the quality of their services. In the long run, patients will only continue to pay for services if they feel that they are getting value for their money. Senior management should strategically direct revenues to build and sustain self-financing centers.
12. *Linking Departmental Expense Budgets with Revenue Budgets:* As health care facilities decentralize their expense budgets by major subunits and by departments, they should also begin tracking user fee revenues by subunit and by department. This financial management tool links cost centers with revenue centers, and provides the necessary information to determine to what degree departments are self-financing. For those departments with user fees, financial records should be kept on a monthly basis showing the exact revenues from user fees returned to that department to pay for salaries and other material costs.



13. *Formalizing Exemption Policies:* It will become increasingly necessary to formalize the exemption policies for user fees for two major reasons. First, as user fees are extended throughout the health care facility complex, it will be important to grant exemptions on a consistent and more objective basis. Second, as the self-financing aspect of user fees becomes more critical, it will be important to ensure that the percentage of patients given exemptions remains within a reasonable level (usually around 10 percent); otherwise, the financial viability of the mechanism will be undermined.
14. *Patient-level Resource Tracking Record System:* Health care facilities should develop a daily log of patient-level characteristics (name, address, exemption status), specific services/procedures provided, payments made, related financial record information (such as receipt number), and, if possible, information on referrals for specialist treatments, further ancillary tests, and hospitalization. It is very important to maintain a coding system for services and payments made for each patient, both for tracking intrafacility payments and to prepare for eventual computerization. International coding systems (for example, CPT or ICD9-CM) could be used, or other simple coding systems could be developed if international standards are not ready to be implemented.
15. *System of Internal Control and Cash Management:* Health care facilities should review the international guidelines on internal control and cash management given in the report cited above (B. Else Internal Control and Cash Management Manual and Questionnaire. November 1995.) and implement them as needed.

## Chapter 1

### INTRODUCTION

The *ZdravReform* Program was introduced to Ukraine in July 1994 and began work in the L'viv and Odessa Intensive Demonstration Sites in May 1995. L'viv Oblast has as one of its key activities to work with two health care facilities, City Hospital No. 1 (CH1) and L'viv Adult Polyclinic No. 2, to completely overhaul their payment and management systems. Under this particular task, the *ZdravReform* team worked with these facilities to revive, refine, and expand the use of user fees and to institutionalize related systems of management accounting.

The specific scope of work forming the basis of this report contains two major parts, which involve the following: (a) Establishing management accounting reporting systems to monitor the performance of major subunits of the hospital complex and departments, including those implementing user fees; and (b) Strengthening the user fee system in terms of revising pricing formulas to be more resource based; identifying opportunities for extending user fees to other services; establishing financial policies and mechanisms on the use of revenues; formalizing exemption policies; strengthening the organizational and management structure to support user fees and related management accounting systems; implementing systems of cash management and control and patient-level resource tracking systems; and establishing a facility-based system of indicators to monitor and evaluate pilot experiments in user fees and related management accounting systems.

This report briefly describes and documents the tools and techniques of user fee financial management and cost and budget management currently being implemented in CH1. It is one of a series of four reports associated with this task. The other three reports comprise a brief trip report (Wouters and Else, November 1995)<sup>1</sup>, a separate tool kit on management accounting techniques being implemented in L'viv Polyclinic No. 2 (Else, November 1995)<sup>2</sup>, and a manual with questionnaires on internal control and cash management for user fees (Else, November 1995)<sup>3</sup>.

This report describes in somewhat general terms the methods and reporting formats being developed at CH1 so that other health care facilities can more easily see what techniques have been applied there and adapt them as appropriate. However, the reader should realize that this document is intended to be a summary of the methods introduced at CH1 rather than a generic and detailed "how to" manual. Chapter 2 describes the hospital and the health care reforms it is currently facing, Chapter 3 documents methods of implementing decentralized systems of budgeting and cost management, and Chapter 4 documents selected policies and procedures

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<sup>1</sup> A. Wouters and B. Else Lviv Demonstration Site: Implementing User Fees and Related Management Accounting Systems. Trip Report. November 1995.

<sup>2</sup> B. Else Instituting Improved Cost Management and Internal Control Systems and Reviving User Fees at Polyclinic No.2 in Lviv. November 1995.

<sup>3</sup> B. Else, Internal Control and Cash Management Manual and Questionnaire. November 1995.

related to implementing user fees. Finally, Chapter 5 concludes with some general recommendations.

## Chapter 2

### CITY HOSPITAL NO. 1

CH1 encompasses five main institutions: a 240-bed inpatient unit (recently reduced from 290 beds), two children's polyclinics, and two adult polyclinics. In addition, CH1 runs two family medicine centers, 33 health clinics in enterprises, and 7 health clinics in schools. The combined staff for these facilities is officially 1,410 (as of 1994), with 344 doctors, 687 nurses, 260 attendants, and 119 administrative, grounds, and other personnel. This system of medical facilities is responsible for a population of approximately 150,000 in Schevchenko, one of five city rayons in L'viv Municipality.

CH1's inpatient unit has five departments: internal medicine, gynecology, surgery, allergies, and ear, nose, and throat (ENT). The latter three departments service the entire city (population, 800,000), while the first two primarily serve Schevchenko Rayon. The polyclinics, which are very similar to one another in the types of services they offer, are responsible for covering different portions of the rayon.

The current phase of the *ZdravReform* Program (ZRP) work in CH1 directly follows from a business plan developed in June 1995 by Annemarie Wouters and Peter Wilson. The plan was devised in collaboration with CH1's senior management. The current report follows up on the following recommendations, which were identified in the plan.

*Budget and Cost Management:* To improve the efficiency and effectiveness of its services under the new global budget system proposed by the L'viv City Health Administration, CH1 needs to decentralize management to its four polyclinics and, eventually, to the departments within each of them. This requires establishing distinct but integrated budgeting and cost accounting systems for the inpatient unit, each of the four polyclinics, each major department, and any other major cost and revenue centers (such as the day inpatient unit and family medicine outpatient centers). Initially, these accounting systems should be set up to be done manually, but with eventual computerization in mind, and should have immediate practical application for supporting daily and strategic management decisions. For each facility and department budget, certain performance indicators should be identified to evaluate whether budgets are being used productively. Many service statistics are already being collected at the department level, but they need to be linked to budget performance.

*User Fees:* In light of increasingly diminished government budgets, it is critical that CH1 diversify its sources of funding. User fees should be implemented for those services above the government-guaranteed minimum benefits list when (1) patients are willing to pay for them; and (2) minimal investments are required to obtain acceptable quality of care. This will require establishing a number of systems, including pricing policies to cover appropriate cost recovery levels; establishing a policy for use of revenues and profits to cover costs and provide performance bonuses; strengthening financial and management accounting systems to be able to

monitor financial viability; ensuring accountability and transparency of funds; developing regular management reporting systems; and formalizing exemption policies.

Between May and October of 1995, three important reforms directly affecting the above recommendations were made. First, as a result of CH1's previous efforts to obtain approval for user fees and ZRP's subsequent strong recommendations in May to the L'viv City Health Administration supporting these efforts, CH1 in July obtained facility-specific approval to implement user fees, which it did for some of its services on October 1.

Second, on October 15, the L'viv Oblast Health Administration issued a decree that changes rayon-level budgeting to per capita global budgeting, effective January 1, 1996. Under the decree, rayons will have substantial flexibility in how they allocate their health budget to individual facilities. Interfacility payments, which are payments between facilities when patients move across geographic boundaries, will not be implemented immediately, but should be established within the next two or three years. This decree also permits the implementation of user fees for those services above the minimum guaranteed package and eliminates oblast-level taxes on user fee revenues.

Third, the L'viv City Health Administration has proposed changing the traditional line item budgets for each of the nonspecialist hospitals and polyclinics to a per capita-based global budget. (CH1 already has a special waiver giving it some flexibility in moving resources among line items.) Under the proposed system, the administration would set aside funds to pay each of its specialized health care facilities; the remaining municipal health care funds would then be distributed among the eight city hospitals and two city polyclinics according to a per capita formula. This formula would use age- and sex-relative statistics used in the former Soviet Union (Sheiman and Igor, 1988). A budget-neutral formula would be used to determine the kupon value per point and, ultimately, the payment per capita for each of the facilities.<sup>4</sup> Points are an index number reflecting the relative amount of resources required to treat individuals in each age/sex group.

In addition to these recent reforms, patients in Ukraine already have legal authority to choose their own physicians and health care facilities, creating competition among health care providers.

To attract patients (both free and paying patients), health care providers will have to use their management skills and financial autonomy to improve the efficiency and effectiveness of their services.

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<sup>4</sup> The local currency is the kupon; as of October 1995, 185,000 coupons = US\$1. Most monetary figures in this report are given in millions of coupons.

## Chapter 3

### IMPLEMENTING DECENTRALIZED SYSTEMS OF BUDGETING AND COST MANAGEMENT

#### 3.1 Some Considerations: Constraints, Challenges, and Opportunities

In developing the tools and techniques for budget and cost management for CH1, the ZRP team paid careful attention to devising systems that could be sustained under existing institutional circumstances. In so doing, the team considered the following key institutional conditions in CH1:

- The city's centralized budgeting system, which only recently is allowing some experimentation in decentralized budgets;
- A chart of financial accounts that covers 18 articles (10 of which are applicable to health care facilities);
- A limited number of senior economists (two) for an inpatient unit, four polyclinics, and two family medicine centers;
- An immediate need for manual systems because of a lack of computers (although eventual computerization is expected);
- The availability of substantial statistics that are used primarily for external reporting rather than for internal management purposes;
- The inconsistent use of coding systems for diagnoses (International Classification of Diseases, Version 9, or ICD9), and the lack of international coding systems for procedures;
- Preexisting patient classification systems that are based on "complexity groups" that include the set of diagnoses treated in each department, grouped according to average length of stay (ALOS);
- Preexisting system procedure groups under which procedures are categorized in each department according to the personnel time required to conduct them;
- Highly skilled administrative and medical staff who are willing and immediately able to implement new tools and techniques; and
- An unclear legal framework on issues relating to cash management, taxation, other reporting requirements, and a minimum set of guaranteed free services.

#### 3.2 Tools and Techniques for Decentralized Budgets

The following tools and techniques are offered as guidelines rather than strict standards to be maintained. Managers in each health care facility should adapt these tools and techniques to fit the specific circumstances and decision-making needs at their facility.

*Rationale:* Breaking down global budgets by major subunits and departments within those subunits can improve the efficiency and effectiveness with which resources are used. Even under a centralized management system, such a breakdown allows senior administrators to track more

carefully how resources are being used to support a facility's health care service delivery objectives.

Department-level budgeting is a necessary step for decentralizing management authority. In many countries, those directly responsible for implementing a specified activity or program often are the most knowledgeable about identifying ways to allocate resources more efficiently. Additionally, better plans can be made and achieved when department managers become more fully involved in the budget planning of their department.

The budgeting process requires that managers plan ahead and consider alternative resource needs. It improves organizational communication, encouraging department managers to communicate to senior medical and administrative managers their approaches for improving the efficiency, effectiveness, and competitiveness of their services. The budgeting process also provides a basis for evaluating departmental performance. In addition, a formal and transparent budget process encourages fairness in apportioning budget allocations to various departments.

*Tools and Techniques:* In July 1995, CH1's senior management made a commitment to institute a more decentralized budgeting system. This means breaking down its global budget into budgets for each of the eight main subunits, and then within each major subunit to the department level. Under the new budgeting system, information on the planned budget, final approved budget, and actual budget is given for all organizational levels (see Table 1). The format for breaking down the operating budget by major subunits is shown in Table 2. As an example, the departmental breakdown of budgets used in the inpatient unit is shown in Table 3 and, for the Adult Polyclinic No. 2, in Table 4.

Once the organizational structure of the main subunits and of the departments within each main subunit was identified, each article in CH1's line item budget was allocated to each organizational unit. Where possible, actual budget amounts for each line item given to the subunit or department were identified.<sup>5</sup> When actual amounts were unavailable, the specific budget article was distributed among the units and departments according to an allocation criterion. (The allocation criteria used for each article is given in Table 5.)

The team also attempted to distinguish variable from fixed resources. At this time, most of CH1's resources are fixed, perhaps with the exception of medicines and nutrition. (These two items are listed separately as variable costs on certain budget forms if the manager feels it is important to track the variable cost component.) In the future, as planning norms are relaxed, a more careful analysis of variable costs will be required.

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<sup>5</sup> In the current system, the terms "actual budget" and "actual expenditures" are used almost interchangeably. Generally, whatever was received as the actual budget was also spent according to specified line items. In the future, as more flexibility in using resources is allowed, a more careful distinction between actual budget and actual expenses will be required.

**Table 1: Example of CH1's Budget Information**

Article	Planned Budget	Final Approved Budget	Department as % of Major Subunit	<u>Actual Budget per Quarter and per Year</u>				
				I	II	III	IV	Annual
1. Wages								
2. Labor Tax								
3. Utilities and Other Indirect Costs								
4. Business Trips								
12. New Equipment								
14. Linens								
16. Building Repair								
18. Other								
<b>Total Fixed Costs</b>								
9. Nutrition								
10. Medicines								
<b>Total Variable Costs</b>								
<b>TOTAL BUDGET</b>								



**Table 2: Example of CH1's Global Operating Budget, by Major Subunit**

Time Period: (Month, Quarter, Year)

<b>Article</b>	<b>Total Health Complex</b>	<b>General Administration</b>	<b>Inpatient Unit</b>	<b>Adult Polyclinic No. 1</b>	<b>Adult Polyclinic No. 2</b>	<b>Child Polyclinic No. 1</b>	<b>Child Polyclinic No. 2</b>	<b>Day-bed Unit</b>	<b>Family Medicine Ambulatories</b>
1. Wages									
2. Labor Tax									
3. Utilities and Other Indirect Costs									
4. Business Trips									
12. New Equipment									
14. Linens									
16. Building Repair									
18. Other									
<b>Total Fixed Costs</b>									
9. Nutrition									
10. Medicines									
<b>Total Variable Costs</b>									
<b>TOTAL BUDGET</b>									

**Table 3: Example of CH1 Inpatient Unit’s Budget Breakdown by Department**

<b>Type of Department</b>	<b>Department</b>
<b>Medical</b>	Surgery
	Ear, Nose, and Throat
	Obstetrics and Gynecology
	Allergy
	Internal Medicine
<b>Ancillary Services</b>	Physical Therapy
	Radiology
	Surgical Room
	Laboratory
<b>Overhead Departments</b>	Inpatient Unit Administration
	Registration
	Laundry
	Boilers
	Kitchen
	Sterilization

**Table 4: Example of CH1 Adult Polyclinic No. 2’s Budget Breakdown by Department**

<b>Type of Department</b>	<b>Department</b>
<b>Medical</b>	Surgery
	Neurology
	Ear, Nose, and Throat
	Ophthalmology
	Internal Medicine
<b>Ancillary Services</b>	Bacteriology Lab
	Clinical Lab
	X-ray
	Physiotherapy
<b>Overhead Departments</b>	Administration

**Table 5: Example of CH1's Cost Allocation Criteria**

<b>Article</b>	<b>Method</b>	<b>Comments</b>
1. Wages	Actual staff lists and salaries	Payroll records are generally well kept. Actual figures should be used since labor accounts for a significant portion of departmental costs (more than 40%).
2. Labor Tax	Actual tax rates	Calculated as 37% of article 1.
3. Utilities and Other Indirect Costs	Several different allocation bases (such as square meters) and various norms	Article 3 contains about 10 subarticles. There is a tendency to want to allocate this article using a great level of precision (for example, allocating each subarticle separately). This is very time-consuming. Using a single allocation base, such as square meters, might be more feasible and generate similar results.
4. Business Trips	Actual amounts	Very limited funds. Usually allocated to central administration.
9. Nutrition	Combination of actual amounts and norms allocated for medical departments	Preferable to use actual amounts.
10. Medicines	Combination of actual amounts and norms per type of medical department	Preferable to use actual amounts.
12. New Equipment	Actual amounts	Represents minor new equipment purchases allocated by central administration.
14. Linens	Norms based on number of beds and number of staff	Greatly underfunded.
16. Building Repair	Actual amounts	Allocation of scarce funds by the administration.
18. Other	Combination of norms and actual amounts	Includes a wide variety of miscellaneous items that should be examined separately.

*Some Sample Findings:* Breaking down budgets by major subunits and departments gives a clear picture of how personnel and nonpersonnel resources are distributed throughout CHI. Various tables can be prepared summarizing this distribution. Tables 6A, 6B, and 6C show the percentage of the total budget going to subunits, to departments within the inpatient unit, and to each budget article. Using this information, CHI management discovered that the percentage going to the inpatient unit was substantially smaller than it expected. With this method of itemization, heads of major subunits and departments can more clearly see which budget items lie within their control and which are beyond their control. They also can identify whether budget allocations are consistent with the strategic plan of their health institution.

**Table 6A: Percentage Breakdown of CHI’s Budget, by Major Subunit**

<b>Major Subunit</b>	<b>Percentage of the Budget</b>
General Administration	6%
Inpatient Unit	25%
Adult Polyclinic No. 1	21%
Adult Polyclinic No. 2	28%
Child Polyclinic No. 1	9%
Child Polyclinic No. 2	9%
Day-bed Unit	2%
Family Medicine Ambulatories	2%

Note: Figures may not add up to 100% because of rounding errors.

**Table 6B: Percentage Breakdown of CH1's Inpatient Unit, by Department**

<b>Department</b>	<b>Percentage of the Budget</b>
Inpatient Unit Administration	1%
Internal Medicine	15%
Surgery	21%
Allergy	15%
Obstetrics and Gynecology	11%
Ear, Nose, and Throat	13%
Registration	5%
Physical Therapy	1%
Radiology	1%
Surgical Room	5%
Laboratory	3%
Laundry	2%
Boilers	2%
Kitchen	2%
Sterilization	2%

Note: Figures may not add up to 100% because of rounding errors.

**Table 6C: Percentage Breakdown of CH1’s Budget, by Article**

<b>Budget Article</b>	<b>Percentage of the Budget</b>
1. Wages	37%
2. Labor Tax	13%
3. Utilities and Other Indirect Costs	12%
4. Business Trips	0%
9. Nutrition	7%
10. Medicines	20%
12. New Equipment	0%
14. Linens	0%
16. Building Repair	0%
18. Other	10%

Note: Figures may not add up to 100% because of rounding errors.

### **3.3 Tools and Techniques for Budget Performance Reporting**

The following tools and techniques are offered as guidelines rather than strict standards to be maintained. Managers in each health care facility should adapt these tools and techniques to fit the specific circumstances and decision-making needs at their facility.

*Rationale:* As the head doctors of major subunits or departments within those subunits assume more responsibility for managing their budgets, it becomes important to develop certain indicators to monitor whether those budgets are being managed efficiently and effectively. Actual budgets should be compared with actual expenses. Actual budgets should also be linked to performance indicators that measure volume of activity (overall and by type of service), productivity of inputs (especially labor), costs per service, and quality of care.

*Tools and Techniques:* The ZRP team prepared sample budget performance reports, by month and by quarter, for the inpatient surgery department and the outpatient surgery department of Adult Polyclinic No. 2 (see Tables 7A through 7D). As should be done in general with budget performance reports, the items included in the polyclinic’s reports are tailored to the individual circumstances of the polyclinic and its departments. For example, CH1 uses a system of “intensity points” to monitor and stimulate staff productivity (see Table 7B). All of this information can be shown graphically as well (see Figures 1 through 8.) Graphical presentations are greatly encouraged because they show trends and patterns more clearly than do tables.

The team's budget performance reports generated substantial interest among CH1's head doctors. Such information required them to explain the trends and patterns in subunit and department productivity, costs, volume, and health indicators. The reports also stimulated them to take more active roles in CH1's strategic planning.

*Some Sample Findings:* Figures 1 through 8 show that CH1's inpatient surgery department experienced decreases in bed-days and productivity during summer 1995. The falling trend in bed-days has occurred in other facilities during this period as well. Clearly, there is a link between bed-days and productivity, and the productivity of nurses appears to be inversely related to the productivity of doctors. The productivity indices, especially when linked with budget information, show that low volumes are costly and inefficient.

**Table 7A: Inpatient Surgery Department, Adult Polyclinic No. 2:  
Budget Performance Report—Budget Summary**

<b>Operating Budget Article</b>	<b>July</b>	<b>August</b>	<b>September</b>	<b>Quarter III</b>
<b>Doctors:</b>				
Article 1				
Article 2				
<b>Nurses:</b>				
Article 1				
Article 2				
<b>Health Aides:</b>				
Article 1				
Article 2				
<b>Other Staff:</b>				
Article 1				
Article 2				
<b>Total Labor:</b>				
Article 1				
Article 2				
<b>3. Utilities and Other Indirect Costs</b>				
<b>4. Business Trips</b>				
<b>12. New Equipment</b>				
<b>14. Linens</b>				
<b>16. Building Repair</b>				
<b>18. Other</b>				
<b>Total Fixed Costs</b>				
<b>9. Nutrition</b>				
<b>10. Medicines</b>				
<b>Total Variable Costs</b>				
<b>TOTAL BUDGET</b>				



**Table 7B: Inpatient Surgery Department, Adult Polyclinic No. 2:  
Budget Performance Report—Performance Indicators**

<b>Indicators</b>	<b>July</b>	<b>August</b>	<b>September</b>	<b>Quarter III</b>
Number of Doctors				
Number of Nurses				
Number of Health Staff				
Number of Other Staff				
<b>Total Staff</b>				
(Salary Plus Tax)/Staff				
(Salary Plus Tax)/Doctor				
(Salary Plus Tax)/Nurse				
<b>Total Intensity Points: Doctors</b>				
Baseline Intensity Points per Month (average of previous four to seven months)				
Productivity Index for Doctors (actual month/baseline month)				
Average Points per Doctor				
Budget per Intensity Point for Doctors				
<b>Total Intensity Points: Nurses</b>				
Baseline Intensity Points per Month (average of previous four to seven months)				
Productivity Index for Nurses (actual month/baseline month)				
Average Points per Nurse				
Budget per Intensity Point for Nurses				

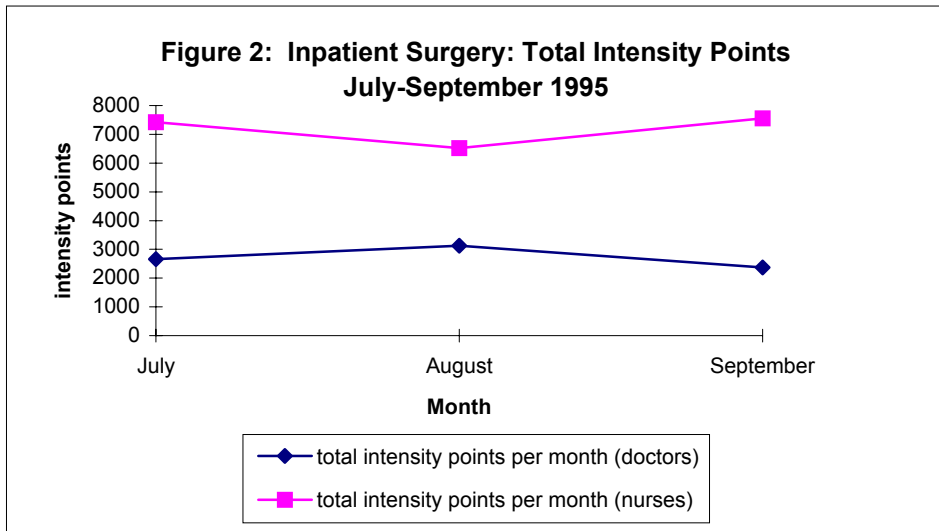
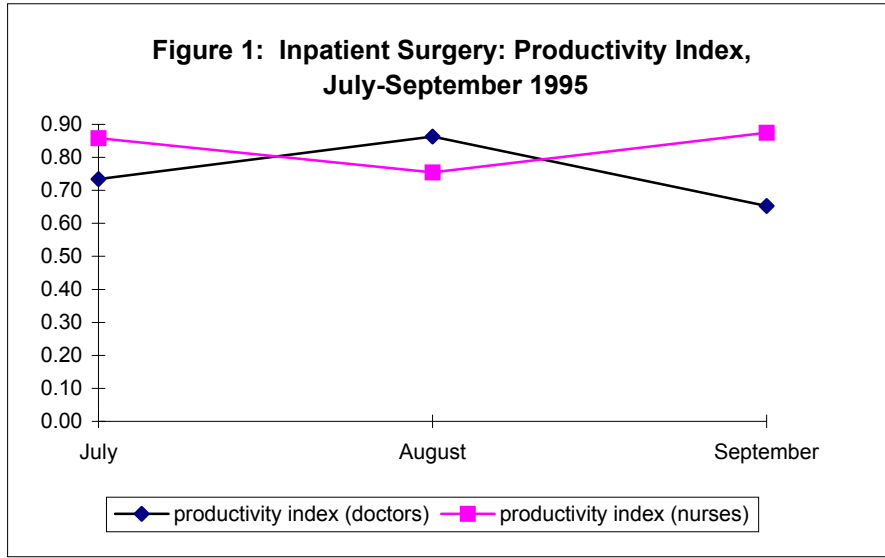
**Table 7C: Inpatient Surgery Department, Adult Polyclinic No. 2:  
Budget Performance Report—More Performance Indicators**

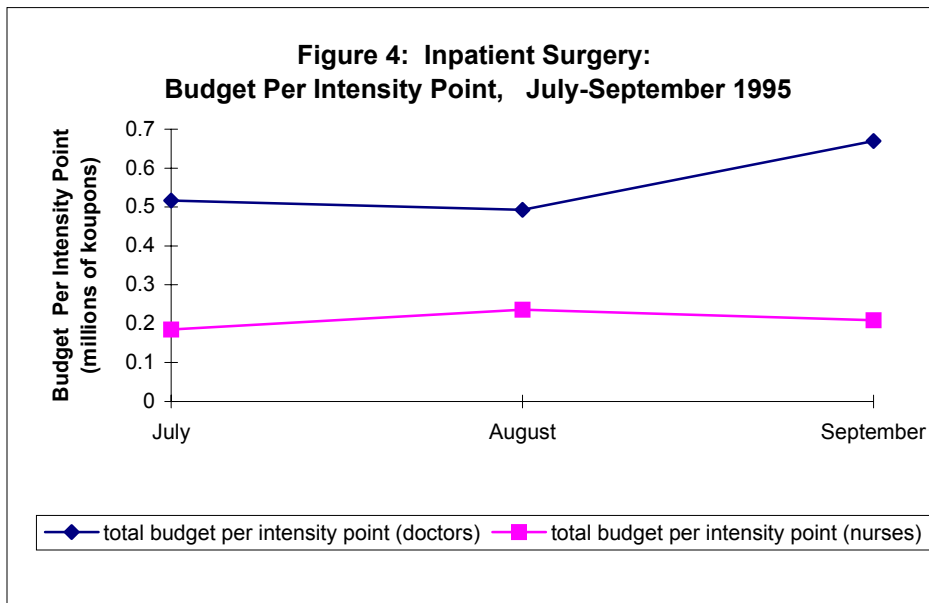
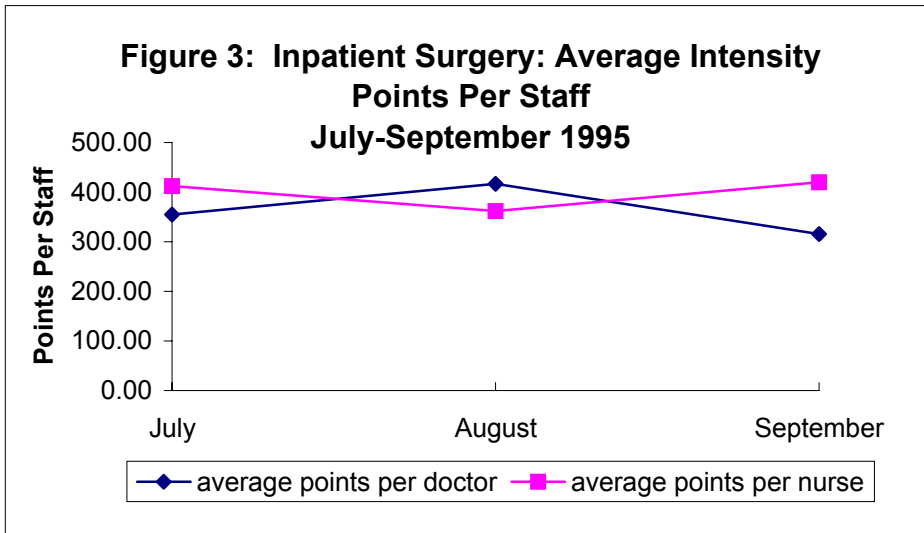
	July	August	September	Quarter III
<b>Standard No. of Bed-days</b>				
Actual No. of Bed-days				
Percent of Planned Occupancy Rate				
<b>Total Actual Budget per Bed-day</b>				
Actual Labor Cost per Bed-day				
Actual Nutrition Cost per Bed-day				
Actual Medicine Cost per Bed-day				
<b>Number of Bed-days per Doctor</b>				
<b>Number of Bed-days per Nurse</b>				
<b>Number of Beds</b>				
<b>Average Length of Stay</b>				
<b>Number of Discharges</b>				
<b>Budget per Discharge</b>				
<b>Number of Deaths</b>				

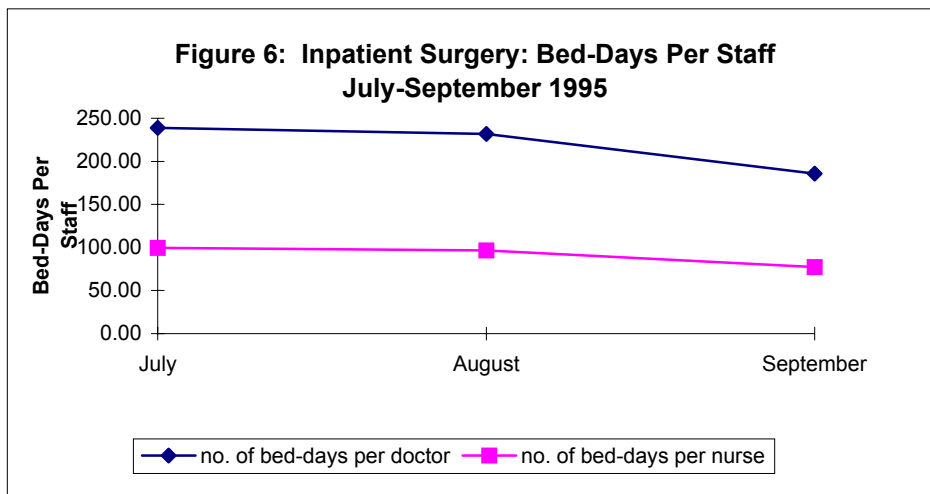
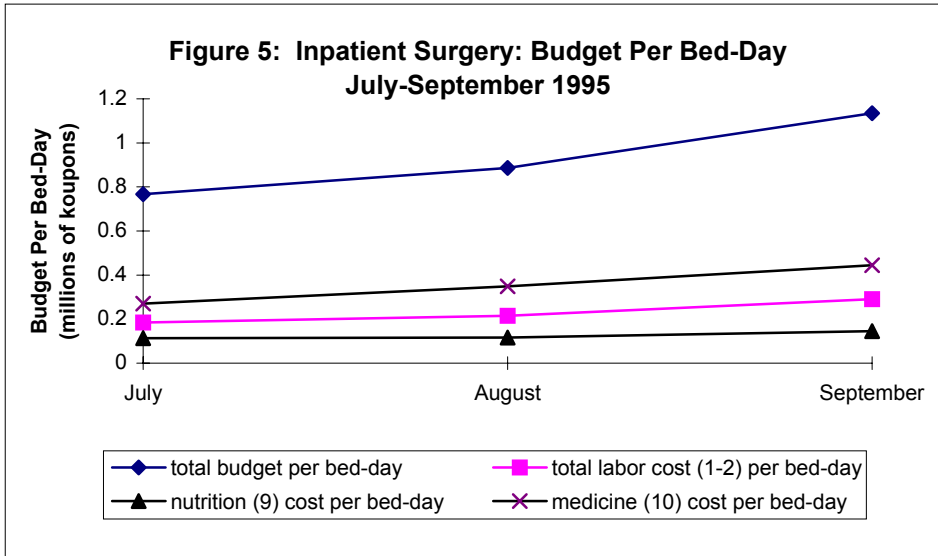
**Table 7D: Outpatient Surgery Department, Adult Polyclinic No. 2:  
Budget Performance Report—Performance Indicators**

	July	August	September	Quarter III
<b>Number of Visits</b>				
<b>Total Actual Budget per Visit</b>				
Actual Labor Cost per Visit				
Actual Nutrition Cost per Visit				
Actual Medicine Cost per Visit				
<b>Number of Visits per Doctor</b>				
<b>Number of Visits per Nurse</b>				

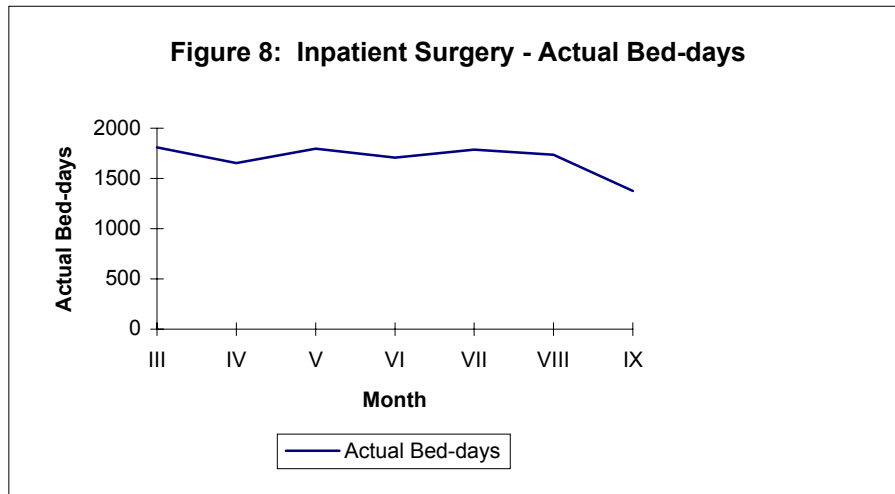
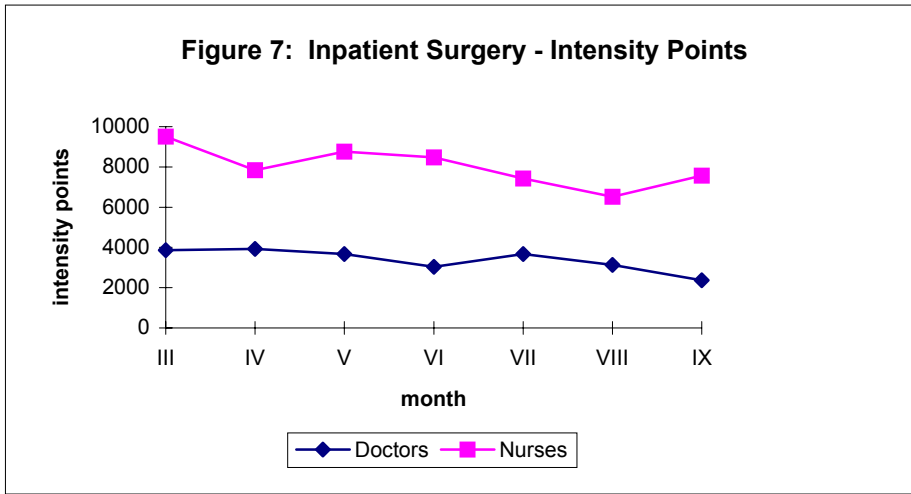
productivity graph







# Intensity points



### 3.4 Tools and Techniques for Cost Management

The following tools and techniques are offered as guidelines rather than strict standards to be maintained. As with the methods described in previous sections, managers in each health care facility should adapt these tools and techniques to fit the specific circumstances and decision-making needs at their facility.

*Rationale:* Cost accounting can be used for several purposes, including (a) setting prices, (b) determining profitability or losses, (c) assessing the efficiency of service delivery (departmental performance reporting, labor productivity, and cost-effectiveness), and (d) creating budgets for management centers of responsibility. Pricing can cover interfacility payments, intrafacility payments, public or private insurance payments, and user fees. Prices can be set for individual units of service (for example, per X-ray, per consultation, or per procedure) or for a package or bundle of services (for example, per day, per visit, per episode, or per case).

The selection of cost accounting tools depends on how the cost information being collected will be used. For example, more or less detail may be required on how overhead and intermediate costs are allocated and how department-level procedure-level costs are calculated. The cost accounting methods introduced here were selected in light of the current situation at CH1, where user fees recover partial rather than full costs, where CH1 is legally required to set prices for each medical and ancillary service separately (rather than per case), and where intrafacility payments will be needed to better track resources within the facility. These methods were also selected to prepare the separate budgets and budget performance reports required for decentralizing budget responsibility, as discussed earlier in this report.

In former Soviet Union countries, the tradition has been to focus on engineered, planned (or standard) costs. Today, it is important that health care facility economists also begin to track the actual costs of services on a regular basis. Actual costs depend on actual department expenditures and the actual volume of services and actual case mix treated during each period of time. With information on actual costs, health care facility economists can determine whether the facility is earning a profit or a loss under any type of pricing mechanism, and/or assess the efficiency of services periodically (ideally, every month). For example, they can compare standard bed-day costs with actual bed-day costs for each department, or they can compare the standard cost for a treatment or case set through an interfacility payment system with the actual costs incurred during a particular month.

*Tools and Techniques:* Based on the rationale above, the cost management reports developed here emphasize accurate and detailed departmental procedure-level costing at a level that is commensurate with the department's ability to control or influence its costs. This approach generates reasonably accurate information and is feasible to use on a regular basis in either a manual or computerized system. It is directed primarily to community hospitals, polyclinics, or group practices that have capable, but few, financial support staff. These facilities must be able to generate good information quickly, without lots of personnel support.

For the purposes of creating decentralized budget responsibility centers and setting prices separately for each service or procedure, the cost management tools the ZRP team devised focus on estimating procedure-level costs within a medical or ancillary department, rather than emphasizing detailed step-down accounting of overhead costs. The team found that extreme detail in overhead allocations was of marginal importance and generally less feasible to maintain under a periodic cost accounting system. Consequently, it determined that greater benefit could be obtained from a more careful effort to identify operating costs that are directly and indirectly related to a department for the purposes of costing activities or departmental procedures.

In essence, the team lumped together into an overhead budget the various administrative, maintenance, and general support functions, and then allocated the functions to final cost centers (hence, single step-down accounting), which include both medical and ancillary departments. Within each medical and ancillary department, procedure-level costs were calculated using relative value unit (RVU) methods, in which the resources of one procedure, complexity group, or case were measured 'relative' to the others. The team selected RVU methods because they can be applied quickly, using as much or as little detail as time and resources allow, yet generate reliable and accurate results.

General administrative expenses for CH1 were found to be about 6 percent of the total budget. In the past, about 8 percent had been added to each department's direct costs to allocate administrative overhead. This is a generally acceptable and simple method. Alternatively, one could also allocate administrative overhead in direct proportion to the full-time-equivalent staff in each department. Any other overhead not captured under the 8 percent could also be allocated in the same way.

The following basic data and steps were used for determining department-level procedure costs at CH1. In the examples that follow, procedure-level costs do not include the overhead allocation portion, but they could easily be redone to include this cost component.

Following the data, Table 8 gives a list of the categories of treatments or services the ZRP team used for cost analysis, Table 9 provides a standard form for doing procedure-level costing, and Table 9 offers a mathematical example that incorporates the steps below.

Data: The team used actual department expenditures (direct and indirect) for a specified month, July–September, 1995. (As noted above, such expenditures can also include overhead allocations. The decision to include overhead depends on whether the financial manager requires estimates of the full or partial cost of each service.)

Step a: Identify major categories of services, procedures, or treatment groups in each department. (Note: The categories of services should be determined with the assistance of the head of the department and should be chosen using two major criteria: (1) each category should use a similar level of resources relative to the other categories (for example, the same ALOS, same labor time, same medicines, and so on), and (2) statistics on volume should be collected in such a way that they correspond to these categories of services.)



Step b: Determine the volume of activity for each of the categories of services, procedures, or treatment groups in each department for the specified month.

Step c: Estimate the RVU for each category of service. A variety of methods exist to do this. (For a more detailed approach to RVU costing that calculates relative intensity points for personnel and nonpersonnel resources, see Else, November 1995.<sup>6</sup> His manual follows a simpler approach than is used here, calculating a single measure of RVU.)

In the example of inpatient surgery, RVUs are based on ALOS (see Table 9A). The assumption is that ALOS gives a reasonable estimate of the relative amounts of all resources (personnel and nonpersonnel) required for various types of treatments. In a relatively resource-scarce environment, where capital investments are low, this seems appropriate. In the case of outpatient services, RVUs can be estimated using the length of time required to perform a treatment or procedure, or a general estimate of intensity of service by an expert group of physicians.

Step d: Convert the actual volume of services to standardized units of service using the RVU weight for each category of service.

Step e: Calculate the cost per standard unit of service by dividing the departmental actual expenditures (either with or without overhead allocations, depending on whether full or partial costing is required) by the total number of standard units of services provided that month.

Step f: Calculate the actual cost for each category of service by multiplying the cost per standard unit of service (e) by the RVU for that service (c).

Step g: Calculate the total actual costs spent on each service for that month by multiplying the actual cost for each category (f) by the actual volume of services in each category (b). The sum of total actual costs spent on each service should equal the total actual budget. If this is not true, an arithmetic error has been made in one of the previous steps.

*Some Sample Findings:* The ZRP team found that most of CH1's inpatient departments had a manageable list of complexity groups that could be used to classify all types of treatments. These groups had defined standard ALOSs from which to derive RVUs. These groups could also be easily used to report the volume of services provided in a department.

On the outpatient side, statistics were weaker in terms of the types of visits made. Consequently, the team occasionally had to rely on expert opinion to determine RVUs rather than use more objective criteria. In the case of ancillary tests, however, information was often available on groups of procedures within a department classified according to the length of time required to conduct each procedure. The team also used these standard lengths of time to develop the RVUs.

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<sup>6</sup> B. Else *Instituting Improved Cost Management and Internal Cost Control Systems and Reviving User Fees at Polyclinic No.2 in L'viv*. November 1995.

Figure 9 gives examples of actual department costs of 16 complexity groups for CH1's inpatient surgery department for July through September 1995. The number of the complexity group in the figure corresponds to the number found in Table 9. Figure 10 (which also corresponds with Table 8) does the same for the four types of visits made to the outpatient surgery department of Adult Polyclinic No. 2 from August through October 1995. Finally, Table 11 compares August 1995 actual costs for each complexity group in the inpatient surgery department (based on allocating the actual department budget using RVUs and the actual volume and case mix for that month) with the standard costs for each complexity group (based on bed-day costs multiplied by the standard ALOS). The table shows that actual cost estimates can vary widely from standard costs, suggesting that reliance on standard costs for analyzing prices, profitability, and efficiency could generate misleading results.

**Table 8: Categories of Treatments or Services Used for Cost Analysis**

Department	Categories of Treatments or Services
Inpatient Surgery	Complexity groups: (1) simple diabetes, (2) diabetes with complications, (3) arteriosclerosis, (4) arteriosclerosis with complications, (5) infectious surgery, (6) varicose veins, (7) thrombophlebitis, (8) hernia, (9) gall bladder stones, (10) gastric ulcer with perforation, (11) appendicitis, (12) complicated hernia, (13) acute cholecystitis, (14) adynamic ileus, (15) thyroid surgery, and (16) liver abscess.
Outpatient Surgery	Categories of visits: primary visit, follow-up visit, simple procedure, and simple outpatient surgery.

**Table 9A: Procedure-level Costing:  
Sample Form for Estimating RVUs for an Inpatient Department**

Category of Service, Procedure, or Complexity Group	Standard ALOS for Each Complexity Group	Average ALOS for All Complexity Groups	RVU (based on ALOS)
1. Simple diabetes	21	31.25	0.67
2. Diabetes with complications	60	31.25	1.92
3. Arteriosclerosis	14	31.25	0.45
4. Arteriosclerosis with complications	30	31.25	0.96
etc...			
<i>Total average length of stay: <math>21 + 60 + 14 + 30 = 125</math></i> <i>Categories of services: 4</i> <i>Average ALOS: <math>125 / 4 = 31.25</math></i> <i>RVU (diabetes) = <math>21 / 31.25 = 0.67</math></i> <i>RVUs establish the hierarchy of the relative consumption of resources among the outputs to be costed.</i>			

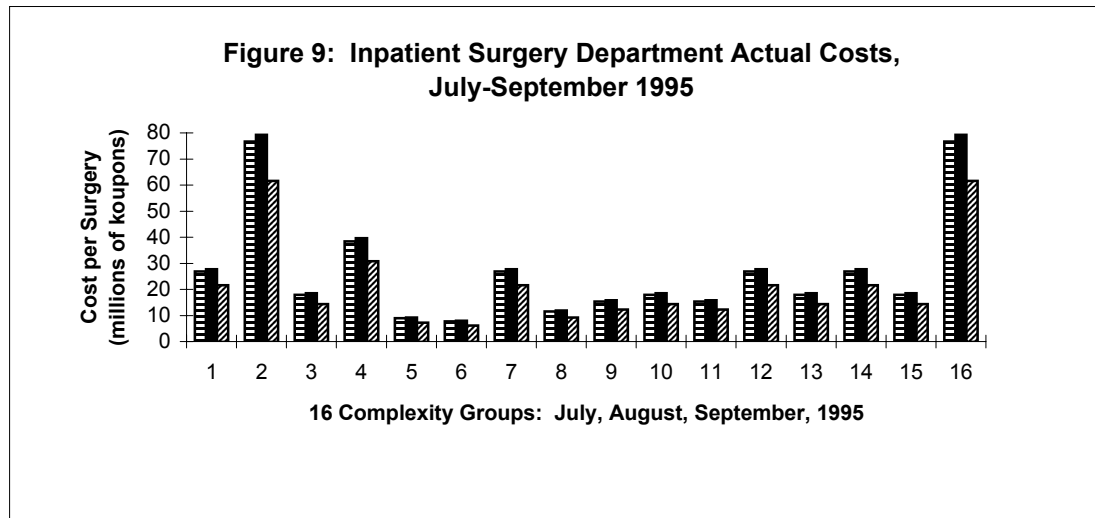
Note: The numbers given in this example do not correspond to real circumstances. They are intended to demonstrate the technique of procedure-level costing only.

**Table 9B: Sample Approach to Relative Value Costing**

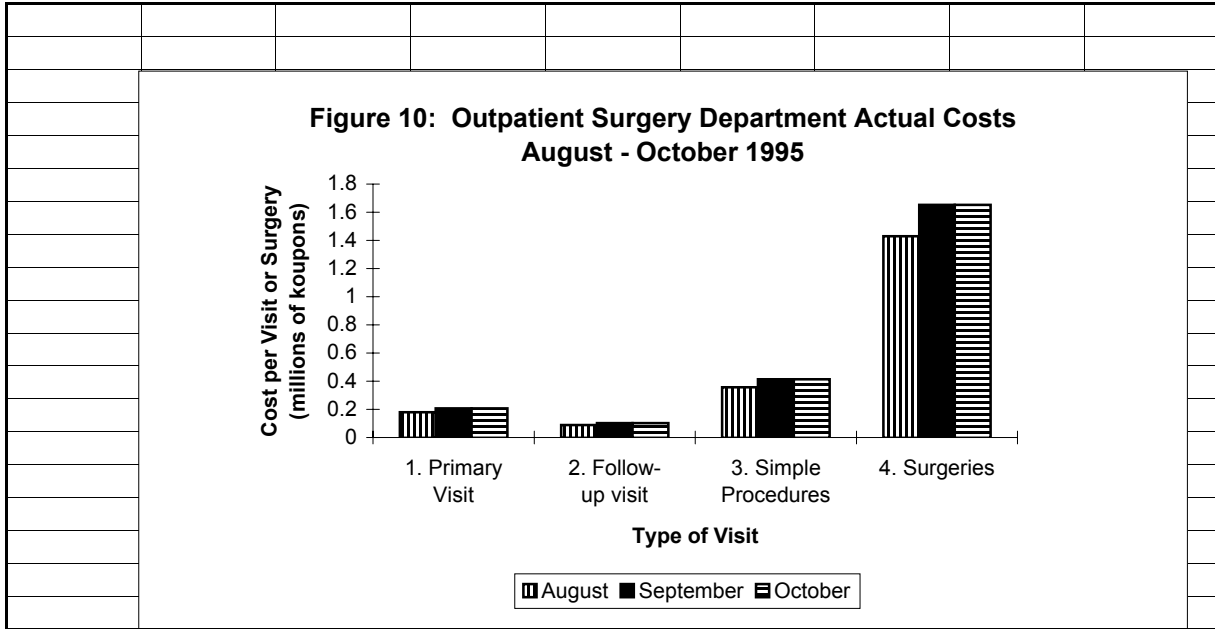
Department: Specify department (for example, inpatient surgery)  
 Period: Specify month (for example, June 1995)  
 Expenditure Data: State actual expenditures for specified month (for example, US\$1,500)

Category of Service, Procedure, or Complexity Group	Actual Volume of Services for Each Category	Relative Intensity Points	Adjusted Standard Unit of Service	Cost per Standard Unit of Service	Adjusted Actual Cost per Type of Service	Total Cost for Each Service
(a)	(b)	(c)	(d) = (b) x (c)	(e)	(f) = (e) x (c)	(g) = (f) x (b)
1. Simple diabetes	10	0.67	6.70	49.64	33.26	332.60
2. Diabetes with complications	5	1.92	9.60	49.64	95.31	476.55
3. Arteriosclerosis	16	0.45	7.20	49.64	22.34	357.44
4. Arteriosclerosis with complications	7	0.96	6.72	49.64	47.65	333.55
etc....						
<p><i>Total adjusted standard units of surgery (sum of column d) = 6.70 + 9.60 + 7.20 + 6.72 = 30.22</i>  <i>Total budget for surgery = \$1,500</i>  <i>Cost per standard unit of surgery = \$1,500 / 30.22 = 49.64</i>  <i>Verify RVU calculation (sum of column g): 332.60 + 476.55 + 357.44 + 333.55 = \$ 1,500 //</i></p>						

Note: The numbers given in this example do not correspond to real circumstances. They are intended to demonstrate the technique of relative value costing only.



graph



**Table 10: Sample Complexity Group Department Costs at CH1:  
Comparing Actual and Standard Costs for Inpatient Surgery, August 1995**

<b>Complexity Group</b>	<b>Actual Cost (RVU Methods)</b>	<b>Standard Costs (Bed-day Costs)</b>
1. Simple diabetes	27,737,794	18,598,199
2. Diabetes with complications	79,250,840	53,137,711
3. Arteriosclerosis	18,491,862	12,398,799
4. Arteriosclerosis with complications	39,625,420	26,568,855
5. Infectious surgery	9,245,931	6,199,399
6. Varicose veins	7,925,840	5,313,771
7. Thrombophlebitis	27,737,794	18,598,198
8. Hernia	11,887,626	7,970,657
9. Gall bladder stones	15,850,168	10,627,542
10. Gastric ulcer with perforation	18,491,862	12,398,799
11. Appendicitis	15,850,168	10,627,542
12. Complicated hernia	27,737,794	18,598,198
13. Acute cholecystitis	18,491,862	12,398,799
14. Adynamic ileus	27,737,794	18,598,199
15. Thyroid surgery	18,491,862	12,398,799
16. Liver abscess	79,250,840	53,137,711

## Chapter 4

### IMPLEMENTING USER FEES

#### 4.1 Background

From 1993 until October 1995, when CH1 first implemented its user fee system in Adult Polyclinic No. 2, CH1's main source of nonbudget funding had been contracts with enterprises to provide annual medical checkups to employees in hazardous occupations. This source of funding accounted for about 3 percent of the facility's revenues in 1993 and less than 1 percent in 1994. Due to difficult economic conditions, however, enterprises are increasingly defaulting on their payment obligations to CH1. Experience in other sites (such as Odessa) shows that user fees can provide a more sustainable source of income than can contracts with enterprises.

CH1's user fee system covers approximately 50 different types of services and procedures offered in the departments of gynecology, clinical laboratory, bacteriology laboratory, radiology, and thermal diagnostic screening. Senior management plans to extend user fees for selected services in the inpatient unit as well.

In the sections below, the status of the major components of CH1's user fees is briefly described, followed by a list of relevant additional techniques and tools that can be implemented to strengthen the user fee mechanism. The explanations of the tools are kept somewhat general for the benefit of other health care facilities attempting to use them. Many of these tools are currently being implemented on a test basis at CH1.

#### 4.2 Some Considerations: Constraints, Challenges, and Opportunities

As noted in Chapter 3, in developing the tools and techniques for financial management of user fees, the ZRP team took care to devise systems that could be sustained under current circumstances at CH1. Such circumstances include a chart of financial accounts covering 18 articles, a limited number of senior economists, and patient classification systems that are based on complexity groups.

#### 4.3 Setting Prices

##### *Existing Situation*

Prices for each of the individual services were approved by the City Health Administration and were set uniformly for all major subunits in the CH1 complex. Prices were based on costing guidelines established by the City Health Administration, including department-level costs covering the usual set of operating budget articles for labor, utilities, capital repair, medicines, and linens. A fixed percentage (based on the portion of total costs attributable to general administration and overhead) was added for overhead administrative costs. Capital depreciation was not included.

For visits, an average cost per visit was calculated. In the case of laboratory or other diagnostic tests, procedures were grouped into categories for each department according to the labor time required to conduct the procedure. RVUs based on these standard labor times were then used to calculate procedure-level costs for each major group of procedures. Patients pay according to the cost price established for each of the 50 items covered in the user fee system, plus a 20 percent valued-added tax. Since the cost calculations were done two to three years ago and have been updated for inflation only through April 1995, prices appear to be considerably below the actual costs of services.

### *Additional Tools and Techniques for Setting Prices*

*Calculating Costs:* CH1's basic technique of establishing prices based on department-level operating costs plus an overhead rate is sound. Some refinements could be considered, however. In medical departments, for example, costs could be calculated in more detail to capture the different types of visits made. Similarly, in ancillary departments, calculations of procedure-level costs based on RVUs derived from the labor time required for each procedure should be continued, but standard labor times need to be rechecked to confirm that they reflect actual practices.

When feasible, relative intensity points could be developed from nonlabor inputs as well. Implementation of a more detailed relative intensity point system depends on having sufficient personnel support and/or computerization. Eventually, building and equipment depreciation costs should be included in costs used for pricing, but at this time, break-even prices are not always attainable, given patients' willingness but limited ability to pay.

Under current law in L'viv, CH1 is required to set prices for each separate service; however, at some point, it may become possible to set prices for a bundle or package of services. More detailed and reliable cost information will make setting prices for a package of services easier and more reliable. Although it is beyond the scope of this report to detail the advantages and disadvantages of setting prices for a package of services, pricing tools should be developed for this possibility.

*Setting Prices for Self-financing:* In many public health care facilities in L'viv, user fees are viewed as an additional source of revenue rather than as a means of explicit self-financing or cost recovery. This is because many of the budget items for critical variable costs are already funded, or patients are required to bring their own disposable medical supplies. When taxes are not fully passed on to patients and prices are set below unit costs, however, after-tax revenues often do not even cover variable costs.

When self-financing is not the objective, the linkage between prices and cost tends to be less strict and revenues are used to fund small equipment purchases or other immediate needs not always connected with user fee services. However, in light of current budget constraints, health care facility managers should increasingly view user fees as a means of self-financing by which



the revenues collected must be used to replace medicines, supplies, and equipment, and even to cover base salaries for health care staff. Then, as the health care facility attempts to become more fully self-financed, prices at a minimum should cover all variable costs and taxes (value-added, profit, and other special taxes). Finally, as patients become willing and able to pay, prices should cover variable costs, taxes, and fixed costs. To encourage appropriate use of referral services, prices should be lowest (or even free) at family medicine centers, higher at polyclinics, and highest at hospitals. Price lists need to be displayed clearly to patients.

#### **4.4 Use of Revenues**

##### *Existing Situation*

As mentioned above, currently, user fees are viewed as an additional source of revenue rather than as a means of explicit self-financing or cost recovery. In this scenario, the prices paid by patients sometimes cover some variable costs, some taxes, and usually no fixed costs. Without the pressure of strict self-financing, managers often pay less attention to the strategic use of these revenues in building self-financing centers within their institution.

CH1's current policy is to distribute revenues to pay for taxes, additional salary, material costs, and administrative needs according to a specific agreement signed with each department. However, because almost 50 percent of revenues are required to cover tax obligations (only 20 percent of taxes are paid for by the patient), little remains for the other uses. Perhaps as a result of the recent L'viv Health Administration oblast decree that states that health care facilities will be exempt from value-added and profit taxes, this tax burden will be alleviated; however, clear implementation of this decree is still pending. The guidelines for determining salary bonuses are being worked out by senior management at CH1, but generally bonuses are linked to the revenue generation performance of health care staff.

##### *Additional Tools and Techniques for Distributing Revenues*

*Use of Revenues under Partial Self-financing:* Current and future budget constraints precipitate the need for recognizing that user fees will increasingly become a means of self-financing. As a result, revenues from user fees should be clearly designated to pay for taxes, variable costs, and, eventually, personnel and nonpersonnel fixed costs. It is particularly important to distribute significant portions of the revenues to improve the quality of services in the departments requiring user fees. In the long run, patients will only continue to pay for services if they feel that they are getting value for their money. Senior management should strategically direct revenues to build and sustain self-financing centers.

*Use of Revenues for Salaries:* In the current economic and political context, use of revenues to augment the salaries of health care personnel is necessary to compensate for very low wage scales, to encourage performance, and to transform the system from informal to more formal payments from patients. However, it is important that salary bonus systems be kept in line with the need to pay variable costs and taxes first. Without firm guidelines on the portion of revenues

going to salary bonuses, there may be a tendency to create an overly generous bonus system that may undermine attempts to reach self-financing levels.

In addition, clear formulas or guidelines should be set for how the health care staff share these revenues among themselves. Working out formal guidelines often creates some serious tensions between staff, but is absolutely necessary at the first possible opportunity. A delicate balance is needed to ensure fairness between competing health care staff, transparency in the distribution of funds, and administrative feasibility in calculating bonuses each month. In general, bonuses should compensate staff according to the volume of work they do (actual provision of services rather than simply the generation of referrals within the institution), the quality of their work, their role in attracting new patients, and their commitment to support the efforts of the team of professionals in their department and/or facility. Keeping daily logs of services and procedures provided to and paid for by each patient, tracked by provider and department, provides information necessary to support a salary bonus system.

#### **4.5 Linking Cost and Revenue Center Budgets**

##### *Existing Situation*

In the initial phase of user fees, CH1 has not yet established a system of tracking the distribution of revenues to the individual departments that receive a share either for salary bonuses or to cover material costs. Instead, revenues are placed in a central account and spent according to previously agreed upon percentages for revenues, materials, and administration.

##### *Additional Tools and Techniques for Establishing Self-financing Centers*

*Linking Departmental Expense Budgets with Revenue Budgets:* As health care facilities decentralize their expense budgets by major subunits and by departments, they should also begin tracking user fee revenues by subunit and department. This financial management tool links cost centers with revenue centers, and provides the necessary information to determine to what degree departments are self-financing.

Table 11 shows a sample departmental statement of revenues and expenses. In this example, taxes are collected based on profit. Expenses are separated into variable and fixed costs so that managers can more easily identify what type of costs user fee revenues can cover.

**Table 11: Sample Departmental Statement of Revenues and Expenses**

<b>Departmental Statement of Revenues and Expenses</b>	
Department: _____	
Month: _____	
<i>Revenues:</i>	
Departmental government budget allocation	
<u>Net revenues from user fees</u>	
<b>Total Revenues</b>	_____
<i>Minus Basic Operating Variable Expenses:</i>	
Article 9: Actual Nutrition Expenses	
<u>Article 10: Actual Medicine Expenses</u>	
<b>Total Variable Expenses</b>	_____
<i>Minus Basic Operating Fixed Expenses:</i>	
Article 1: Actual Wages	
Article 2: Actual Labor Tax	
Article 3: Actual Utilities and Other Indirect Costs	
Article 4: Actual Business Trips	
Article 12: New Equipment	
Article 14: Actual Linens	
Article 16: Actual Building Repair	
<u>Article 18: Actual Other</u>	
<b>Total Fixed Expenses</b>	_____
<b>Total Operating Expenses</b>	_____
<b>Net Operating Profit (Loss)</b>	
<b>before Taxes</b>	_____
<b>Minus Taxes</b>	_____
<b>Net Operating Profit (Loss) after Taxes</b>	_____

## **4.6 Exemption Policies**

### *Existing Situation*

Many patients are exempt from payment because of their official status as members of a “vulnerable” group. These include veterans, victims of Chernobyl, invalids, and various elderly people. In CH1, the chief doctor of the gynecology department in Adult Polyclinic No. 2 also interviews patients without official exemption status if they are requesting exemption because of hardship circumstances. The chief doctor grants such a status on an individual basis and provides full or partial exemption.

### *Additional Tools and Techniques for Exemption Policies*

It will become increasingly necessary to formalize exemption policies for user fees at CH1 for two major reasons. First, as user fees are extended throughout CH1, it will be important to grant exemptions on a consistent and more objective basis. Second, as the self-financing aspect of user fees becomes more critical, it will be important to make sure that the percentage of patients granted exemptions remains within a reasonable level (usually around 10 percent); otherwise, the financial viability of the mechanism will be undermined.

Although exemption policies can be defined in a variety of ways, some suggested guidelines include the following: (a) posting publicly advertised criteria for exemption status, (b) maintaining a list of objective criteria for granting exemptions, (c) granting either total or partial exemptions, (d) requiring periodic reevaluation of exemption status, (e) ensuring the privacy of the patient who applies for exemption, (f) providing documentation of exemption status, and (g) establishing targets for the total number or total value of exemptions given.

## **4.7 Financial Management Record System**

### *Existing Situation*

L’viv Oblast requires that businesses, including health care facilities, maintain an official system of cash receipts (sequentially numbered). The facility keeps one part of each receipt, and the patient keeps another, tear-off portion. The chief nurse also keeps a notebook in which she logs the date of service, name and address of the patient, text description of services rendered, and the total payment.

The existing, required system of keeping cash receipts is adequate, but the portion of the receipt kept at the facility should list, by code, the specific services rendered, total payment, and patient name and address. Service codes could be those used internationally (such as CPT and ICD9-CM) or could comprise a facility-specific list corresponding to services and procedures charged. Coding is absolutely necessary for future computerization.

### *Additional Tools and Techniques for Financial Record-keeping*

The internationally known Peg-Board™ system provides a useful basis for establishing a record-keeping system that tracks patient-level services and procedures and payments made. This manual tracking system can cover a full range of accounting functions (revenues, cash, payroll, accounts receivable, and accounts payable). With it, managers can keep a daily log of patient payments that can be adapted to meet local information needs. For example, a one-page daily log form could include the date of service, receipt number, primary physician, name and address of patient, exemption status, list of services rendered (by code and categorized by department), and total payment by patient. Itemization (and coding) of specific services rendered is necessary to track resource use by department, to calculate revenues earned by department, and to determine salary bonuses. The log would also be useful in identifying patients as either new or repeat patients to determine whether the health care facility is attracting new clients. Referrals to specialists and other ancillary services should also be tracked.

In adapting the Peg-Board™ system, the following criteria should be met. The system should (a) be simple and easy to operate by existing personnel and fit easily within existing record-keeping systems; (b) be linked to the patient registration process; (c) not be data intensive, at least until computerization begins (even paper is scarce at this point); (d) focus initially on tracking cash revenues earned and statistical data on utilization, types of visits, procedure performed (by code), and, if possible, information on referrals to specialists or other ancillary services; (e) be based on cash; and (f) fit within the existing accounting system.

As CH1's user fee system expands across different departments, a daily log system should be created for each department separately to record patients served, services rendered, and payments made. An example of such a log is given in Table 12.

## **4.8 Internal Control and Cash Management**

### *Existing Situation*

The existing cash receipt system described above can be easily modified for health care facilities. General systems of internal control and cash management are in the process of being developed, and some international standards may be useful to implement. The ZRP team prepared a checklist of international standards for internal control and cash management methods and translated and distributed it to CH1 and Lviv City Polyclinic No.2 for their review and implementation as needed.

### *Additional Tools and Techniques for Internal Control and Cash Management*

(Note: A brief outline is presented here; a more detailed checklist is available in B. Else, *Internal Control and Cash Management Manual and Questionnaires*, November 1995.)

Following is a list of key guidelines for setting up a system of internal control and cash management. The system should (a) completely separate the function of receiving cash from the

function of disbursing it; (b) assign definitive and clear-cut tasks to designated individuals responsible for cash management; (c) establish definite and separate routines for managing the inflow and outflow of cash; (d) separate the handling of cash from the accounting of it (those who handle cash should not be the same as those who maintain the cash records, and vice versa); and (e) arrange for daily deposits of all cash.

**Table 12: Sample User Fee Record-keeping System for 5 CH1 Departments:  
Daily Log of Patients Served, Services Performed, and Payments Made**

							Revenues Earned by Department							
Date	Receipt Number	Primary Doctor	Name	Address	Exempt Status %	Code of Service	Gyne-cology	Clinic Lab	Bacter. Lab	X-ray	Thermal Diagnosis	Other	Total Payment	Tax

Useful additional information:

1. As the user fee program expands, separate daily logs should be maintained for each department.
2. Information should be collected on referrals for specialist treatments, ancillary tests, and hospitalizations.
3. Procedure codes may be facility-specific at first, but should eventually match international coding systems.

#### **4.9 Organizational Structure**

##### *Existing Situation*

CH1 has appointed an administrative director for its user fee program. She works closely with the economic director of the health care facility complex. The user fee system is implemented through a contract between CH1 and the City Rada, legislative body, and department-level contracts between CH1’s senior administration and the chief doctor of the department involved.

CH1’s contract with the city does the following: (a) designates the departments in which user fees can be charged; (b) approves the price list (developed following the guidelines of the City Health Administration); (c) places responsibility for cash management with the chief doctors of the polyclinics; (d) establishes a revenue-sharing policy for salaries, material costs, and administration; (e) recognizes the role of the administrative director of user fees; and (f) permits implementation as of October 1, 1995. The contracts between the hospital administration and the chief doctor of each department defines the responsibilities of the department (such as ensuring

general conditions of work and financial accountability) and the responsibilities of the administration (including providing rooms, equipment, and medicines and supplies, and following the revenue-sharing policy). Terms for ending department-level contracts are also defined.

The chief nurse of CH1's gynecology department currently has the main responsibility for collecting cash, filling out daily logs of patient activity, and writing receipts. Eventually she will be assisted by a cashier, but this cashier will also be supporting the polyclinics in their user fee programs. On a daily basis, the chief nurse brings cash receipts to the accounting office. On matters of policy and procedure, she reports to the economic director and the director of user fees of the hospital complex.

#### *Additional Tools and Techniques for Organizational Structure*

*Legal Organization:* The current legal framework requiring that contracts be signed between the City Health Administration and CH1 creates many obstacles and limits CH1's ability to maintain competitive, cost-based prices. It also compromises CH1's ability to extend user fees where they are deemed appropriate. Every attempt should be made to reduce these legal constraints.

*Financial Support Personnel:* It is absolutely critical that health care facilities expand their financial support personnel. Implementing user fees requires cashiers to collect cash, business managers to ensure that proper procedures and policies are followed, and economists and financial directors to set prices and prepare department-level expense and revenue budgets on a regular basis. This is especially true if user fees are implemented at the same time that the health care facility is decentralizing its budget and cost management systems. Although in the initial phases the existing number of personnel may be sufficient, it will not be long before more financial support personnel are needed to maintain detailed, reliable, regular, and timely financial reports for major subunits and departments within the health care facility complex.

## Chapter 5

### RECOMMENDATIONS

The recommendations below support the current set of demonstration activities in progress at CH1.

#### 5.1 Decentralized Budgeting and Cost Management

1. *Global Budgets and Centers of Budget Responsibility:* Health care facilities should continue to break down global facility budgets by major institutional subunits and departments or cabinets within those subunits. Such information needs to be maintained on a systematic and regular basis (for example, monthly or quarterly). Senior management should follow up on this enhanced financial information system with the creation of decentralized centers of responsibility management. Heads of major subunits and departments should become increasingly accountable and responsible for their departmental budgets. This should take place in conjunction with the strategic planning process of the hospital.

Budget performance reports should be developed for each area of budget responsibility. These reports should link financial, volume, productivity, and health status information, and should provide a set of indicators useful for maintaining accountability under a system of decentralized budget responsibility.

2. *Cost Management Reports:* The selection of cost accounting tools depends on how the cost information acquired will be used. More or less detail may be required in how overhead and intermediate costs are allocated and how department-level, procedure-level costs are calculated. It is recommended that in a health reform context in which (a) user fees are designed to recover partial rather than full costs; (b) regulations require that prices be set for each medical and ancillary service separately; and (c) management is attempting to decentralize budget responsibility, that cost management reports emphasize departmental procedure-level costing at a level of detail and accuracy commensurate with the department's ability to control or influence its costs. Less detail is likely to be necessary when carrying out a multiple step-down allocation of overhead and intermediate costs to medical departments.

Economists should work with medical staff to begin to link cost management efforts with clinical outcome measures, even if those clinical outcomes are general-level observations. It is important to prevent a cost management effort from being seen as oblivious to the issue of quality of care. The two go hand in hand, as evidenced by clinical pathways and medical guidelines being promoted in other activities at the pilot facilities.

3. *Identification of and Training in Relevant and Feasible Financial Management Tools:* Initial technical assistance provided to selected pilot facilities in budget and cost



management was critical to define the relevant and feasible set of tools for group practices, small polyclinics, and small hospitals in Ukraine. Most of the financial management tools had to be greatly adapted. The technical assistance should be followed up with more thorough training in the essential tools of cost accounting, budgeting, and financial management concepts, principles, and techniques. Such training, followed by additional technical assistance, would solidify the sustainability and institutionalization of the methods introduced.

## 5.2 User Fees

1. *User Fee Services:* Policymakers should facilitate the rapid definition of the defined benefit package of free services guaranteed by the oblast so as to promote a clearer definition of which services could be provided for a user fee.
2. *Legal Framework for Setting Prices:* Policymakers should minimize legal constraints on rules for setting prices, both in terms of formulas for setting the level of prices and in terms of how services can be bundled (price per individual service versus price per package of services).
3. *Pilot Site Waivers:* Policymakers should offer pilot facilities legal waivers to experiment with new forms of user fees.
4. *Taxation:* Policymakers should reduce both national- and oblast-level taxes levied on user fee revenues. Taxation policies should be clearly disseminated to all health care facility managers and oblast and local tax inspectors..
5. *Calculating Costs:* Under the current legal framework and under a system of partial self-financing, the basic technique of establishing prices based on department-level operating costs is adequate. Some refinements should be considered, however. Costs per service should be set for each category of visit (for example, primary visit, follow-up visit, and so on) provided in the medical departments. Calculating prices for procedures in each ancillary department based on procedure-level costs using relative value units for categories of procedures, tests, and services should be continued. (This is the same technique described in Section 3.4 above.)
6. *Setting Prices for Self-financing:* When user fees are viewed as an additional source of revenue rather than as a means of explicit self-financing or cost recovery, the linkage between prices and costs need not be strict. Health care facilities should soon realize, however, that in light of current budget constraints, self-financing (under which the revenues collected must be used to replace medicines, supplies, and equipment, and cover base salaries for health care staff and fixed costs) will become increasingly important. As health care facilities attempt to become further self-financed, prices—at a minimum—should cover variable costs and taxes. As patients become willing and able to pay, prices

should cover variable costs, taxes (value-added, profit, and other special taxes), and fixed costs.

7. *Use of Revenues for Salaries:* It is important that salary bonus systems associated with sharing revenues from user fees be kept in line with the need to cover variable costs and taxes first. Clear and transparent formulas or guidelines should be set for how the health care staff should share these revenues among themselves; otherwise, favoritism may occur and cause serious tension between staff members. In general, salary bonuses should compensate staff according to the volume of work they do (actual provision of services rather than simply the generation of referrals within the institution), the quality of their work, their role in attracting new patients, and their commitment to supporting the efforts of the professionals in their department and/or facility.
8. *Use of Revenues for Nonpersonnel Material Costs:* It is important to distribute significant portions of the revenues to improve the quality of services in the specific departments implementing user fees. In the long run, patients will only continue to pay for services if they feel that they are getting value for their money. Senior management should strategically direct revenues to build and sustain self-financing centers.
9. *Linking Departmental Expense Budgets with Revenue Budgets:* As health care facilities decentralize their expense budgets by major subunits and departments, they should also begin tracking user fee revenues by subunit and department. This financial management tool links cost centers with revenue centers, and provides the necessary information to determine to what degree departments are self-financing. For those departments charging user fees, financial records should be kept on a monthly basis showing the exact revenues from user fees returned to that department to pay for salaries and other material costs.
10. *Formalizing User Fee Exemption Policies:* It will become increasingly necessary to formalize the exemption policies for user fees for two major reasons. First, as user fees are extended throughout the health care facility complex, it will be important to grant exemptions consistently and more objectively. Second, as the self-financing aspect of user fees becomes more critical, it will be important to ensure that the percentage of patients given exemptions remains within a reasonable level (usually around 10 percent); otherwise, the financial viability of the mechanism will be undermined.
11. *Patient-level Resource Tracking System:* Health care facilities should develop a daily log of patient-level characteristics (including name, address, and exemption status), specific services/procedures provided, payments made, related financial information (such as receipt numbers), and, if possible, information on referrals for specialist treatments, further ancillary tests, and hospitalization. It is very important to maintain a coding system for services performed and payments made for each patient, both to track intrafacility payments and to prepare for eventual computerization. International coding systems (such as CPT or ICD9-CM) can be used, or other simple coding systems can be developed if international standards are not ready to be implemented.

12. *System of Internal Control and Cash Management*: Health care facilities should review the set of international guidelines on internal control and cash management given in a separate report and implement them as needed.<sup>7</sup>

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<sup>7</sup> B. Else, *Internal Control and Cash Management Manual and Questionnaires*. November 1995.