PRIMARY CARE CASE STUDY 0885

Establishing Family Medicine Outpatient Clinics at City Hospital No. 1 in L'viv, Ukraine

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Submitted by the Zdrav*Reform* Program to:
AID/ENI/HR/HP

AID Contract No. CCN-0004-C-00-4023-00
Managed by Abt Associates Inc.
with offices in: Bethesda, Maryland, U.S.A.
Moscow, Russia; Almaty, Kazakhstan; Kiev, Ukraine

July 1997

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1.0 THE HISTORY OF FAMILY MEDICINE IN L'VIV

Over the past seven years in L'viv, Ukraine, a group of health administrators, medical faculty, and health managers launched academic and practice experiments in family medicine. This case study describes the reforms, with particular emphasis on the successful experience of a growing family medicine network of outpatient clinics associated with City Hospital No. 1.

1.1 The Need for Improved Primary Health Care

The health care system in Ukraine is in crisis. The collapse of the former Soviet Union, the independence of Ukraine, and the loss of Ukraine's trading partners all contributed to its severe economic decline. Ukraine's economy can no longer support the inefficient, specialist dominated, centrally planned health care system which has been in place for some seven decades. It is probably no accident that the health of the population has declined as the economy has deteriorated. The official statistics indicate that since 1991, the year of independence, there has been a progressive increase in mortality, a progressive fall in birth rate, and an actual decline in the population.

Indicator	1991	1992	1993	1994	1995
Mortality/1000 persons	12.9	13.4	14.2	14.7	15.4
Births/1000 persons	12.1	11.4	10.7	10.0	9.6
Population (millions)	52.1	52.2	52.1	51.7	51.3

The high and deteriorating mortality probably relates to deteriorating life styles. Leading causes of death are cardiovascular disease, cancer, and pulmonary disease. These leading causes of death have important behavioral and environmental components which include smoking, alcohol abuse, a high fat diet, inadequate exercise, air pollution, and radiation.

Ukraine has inherited substantial inefficiency from the previous Soviet system. That system was centered not around the patient, but on the specialist. District physicians existed, but their function was primarily that of writing medical excuses for patients not able to go to work. Patients who were ill were on their own to find the right specialist. As a result, and in order for physicians to protect themselves, referrals to other specialists or to hospitals were over-utilized. The specialists themselves found that their skills were not effectively used; e.g., an otolaryngologist would treat a common cold, and a patho-neurologist would be consulted for common back strain. Patients were admitted to hospitals for laboratory tests that could have been done on an outpatient basis, or sometimes just for a rest. Hospital stays were weeks or months in duration.

Changes in the system are inevitable and must be far reaching, including both clinical practice as well as the economic and administrative aspects of the system. From the

clinical perspective, some system of primary care must be developed, where ***primary care is the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community*** [1] Thus, the central feature of primary care is the patient. Family medicine is one system which aims at providing primary care by developing a sustained partnership with the patient. While other primary care physicians, such as pediatricians and internists, alone, or in combination with other physicians, can provide effective primary care, the present report is concerned with a model of family physician ambulatories (clinics) which are successfully providing primary care in L'viv Oblast. The success has depended upon the introduction of both clinical and economic reforms.

1.2 The Cost-Effectiveness of Family Medicine

Experience from around the world has demonstrated that primary health care is cost effective for two major reasons. First, primary health care treatment costs less than specialist care. Second, primary health care physicians tend to request fewer diagnostic tests and follow-up visits than their specialist counterparts. Evidence also suggests that additional investment in primary health care is more than offset by the resulting cost-savings. These additional investments in primary health care can made through alternative payment systems and salary incentives.

A study in the United States, based on 3,737 adult office encounters with 132 family medicine physicians and 2,250 adult office encounters with 102 internists, found that internal medicine physicians used twice as many blood tests, blood counts, chest x-rays and electrocardiograms as did family medicine doctors.[2] A study in Colorado found that costs for patients enrolled in a primary health care physician program were 15 percent less than for patients who did not have access to a regular primary care physician .[3] Finally, in the U.S. Medicare health insurance program for the elderly, research has demonstrated a one percent decline in expenditures per insured member for every 10 percent increase in the supply of general or family medicine practitioners in a region.[4]

As the report below will show, these same cost savings also appear to be realizable in Ukraine. The best evidence is the reduction of unnecessary ambulance calls that has been observed in areas where patients have come to rely more and more on their local family medicine doctors for urgent care. In a speech on October 17, 1996, Dr. Morozov of the Ministry of Health of Ukraine stated that in Kiev alone, unnecessary ambulance calls result in expenditures of more than 2.5 million hryvnia (about $1.38 million) per year. In

[1] Institute of Medicine. *The Future of Primary Care.* New York. 1996.
[2] Cherkin, D. et. al., "The Use of Medical Resources by Residency-Trained Family Physicians and General Internists: Is There a Difference?", *Medical Care*, Vol. 25, 6 (June 1987): 455-469.
[3] Fryer, G. *Evaluation of the Primary Care Physician Program.* Colorado Department of Social Services, November 1991.
[4] Dor, A. and J. Holahan, "Urban-Rural Differences in Medicare Physician Expenditures,"*Inquiry*, 27 (1990): 307-318.

addition, according to a survey of patients at a family medicine ambulatory in L'viv, the rate of referrals from a family medicine doctor to another specialist appear to be less than half that of internists and pediatricians, while referrals to a hospital were less than half those of the internist. When a patient knows his or her physician and has confidence in the physician's advice, the desire for referrals declines.[5]

1.3 Origin of Family Medicine in L'viv

Family medicine in L'viv Oblast has developed in an evolutionary process. The concept of family medicine in Ukraine was established in 1988 when Dr. Eugenia Zaremba, of the L'viv Medical University, understood that family medicine provided better health care than was available at the time in the Soviet Union. She enlisted the support of the rector, Professor Michael Pavlovsky, who visited family medicine offices on the west coast of the United States, while Dr. Zaremba visited comparable facilities in Great Britain. With support from oblast and city health administrators, Dr. Zaremba and Professor Pavlovsky then instituted a four-month course at the Medical University in order to retrain practicing physicians for family medicine. The use of a short course to retrain physicians who already had practical experience as pediatricians and internists, and who understood primary care, was a successful strategy. The training allowed internists to expand their practice to children and pediatricians to expand their practice to adults. These strategies were implemented at minimal cost and created a cadre of family physicians with minimal delay. The achievement was impressive, inasmuch as a tradition of family medicine had not existed in Ukraine for more than 70 years. Perhaps most remarkable was the fact that candidates for re-training were found, even though family medicine was not a recognized specialty and there were no salary incentives to encourage re-training.

In 1991, L'viv Medical University obtained space in L'viv City Polyclinic No. 2 to open a family medicine department, staffed by graduates and headed by Dr. Sudova. This department continues to function as a clinical family medicine training site.

1.4 The Stimulus of Health Care Financing Reforms

The importance of and need for primary health care and family medicine were heightened by expectations of substantial changes in health care financing in Ukraine. In particular, the 1992 Basic Law on Health Care endorsed: multiple sources of financing for health care, the decentralization of government control, self-administration for facilities, and free patient choice of doctors and health care providers. It also called for establishing a guaranteed minimum package of medical and sanitary services, which would be financed by the state budget, based on a per capita appropriation, and which would give health care providers the right to retain savings realized from their budgetary allocations without any reduction in financing for some future period. It was expected that the proposed alternative payment systems would create incentives to increase productivity, e.g., by reducing the average length of stay for inpatients and by shifting the provision of care from specialists to primary care physicians.

[5] Hrubiy, Serhiy. *Family Medicine Patient Satisfaction Survey, 3 volumes.* Ukraine Marketing Group, Lviv. (1996).

Following passage of the 1992 Basic Law and consistent with its provisions, the L'viv oblast and city health care administrations jointly proposed to change the method of financing hospitals in the region. In October 1995, the Oblast Health Administration issued a decree intended to introduce per capita global budgeting at the rayon level, effective January 1, 1996. The decree offered rayons substantial flexibility in the allocation of health finance to individual facilities, while also permitting user fees for services in excess of the oblast's guaranteed minimum package. Implementation of this decree, however, has been delayed due to severe budget constraints.

In 1994, the L'viv City Health Care Administration proposed a new budget policy for the city's health care providers that would have replaced the traditional line item budget based on beds, utilization, and numbers of visits with a per capita-based global budgeting system. It was hoped that a global budgeting system would lead to budget allocations that corresponded more closely to the size and case mix of the populations served by each facility, than did the current system, and give hospitals greater flexibility in the use of resources, subject to available funds.

1.5 Family Medicine Network at City Hospital No. 1

In response to these proposed reforms, L'viv City Hospital No. 1 (CH1) began to design and implement its own reforms, so as to enable it to manage its resources in a more cost-effective manner. With approval from the oblast administration, the City Health Care Administration, and the L'viv City Rada (parliament), CH1 was given what, in effect, amounted to a waiver from applicable rules and regulations, which allowed the hospital to experiment with new management methods and user fees, and to prepare for the introduction of per capita global budgets. A pivotal component of the reforms instituted by CH1 was the creation of a network of family medicine ambulatories.

Before 1994, CH1 consisted of five main institutions: a 290 bed hospital and four polyclinics (two for children and two for adults). It had a dual mission: to provide basic inpatient and outpatient health services to the population of Shevchenko district, with a population of about 150,000; and to provide certain specialized inpatient services for the entire city of L'viv, with a population of approximately 800,000. Since 1994, CH1 has eliminated 60 overnight beds, established a 50 bed daybed unit, and opened two family medicine ambulatories.

In early 1995, Dr. Jemma Jafarova, chief physician at CH1, and Dr. Valentina Lapidus, chief physician of one of the adult polyclinics, opened a family medicine ambulatory with a slightly different orientation than the department created by L'viv Medical University at L'viv City Polyclinic No. 2. CH1 chose to locate the new facility far from the hospital in the Pol'ova neighborhood, the home of 10,000 persons and the site of several industrial enterprises. In fact, the ambulatory is located physically on the grounds of one of these enterprises—a concrete manufacturer with 540 employees, 26 percent of whom work under hazardous conditions. The ambulatory has six family physicians, six family nurses, an obstetrician, a laboratory technician, a procedure nurse, a receptionist, and a medical

aide. Each physician provides care to 518 families, or 1,500 of persons, from birth to death. The facility includes two family physician rooms, a procedure room, a laboratory, a pre-examination (history-taking) room, physiotherapeutic and examination rooms, and a pharmaceutical kiosk. It is supported by a computerized information system that records basic demographic data and service utilization statistics for the entire 10,000-person population. This information system generates summaries of physician profiles, patient service histories, and polyclinic/hospital referral patterns.

Based on the success of their first family medicine ambulatory, in July 1996 Drs. Jafarova and Lapidus opened the Varshava Ambulatory on the ground floor of an apartment building. The Varshava Ambulatory, also designed to serve a population of 10,000 persons, introduced a number of innovations that were not present initially in the Pol'ova facility, such as the use of family medicine nurses who had been retrained in a special two-month course. A dentist and a 3-bed daybed department also distinguish the Varshava clinic from its predecessor. Plans are now being developed to open a third ambulatory in 1997.

These two ambulatories differed markedly from the main outpatient providers of the old Soviet system. Each facility is small, free-standing (i.e., not attached to a large polyclinic or hospital), located far from the sponsoring hospital, and designed to serve a small population only a tenth or less the size of that normally served by city polyclinics. The ambulatories also introduced important economic and administrative reforms, including salary incentives. Taken together, the innovations that characterize the two ambulatories demonstrate the considerable evolutionary progress that has been achieved in the development of family medicine in the past seven years. Key clinical and economic features of these clinics are described in the following two sections.

2.0 CLINICAL FEATURES

2.1. Physical Description and Utilization

The ambulatories consist of 2-3 examining rooms, a dental room, a laboratory, a work room, a day care room with two beds, and a toilet. Patients sit along the hallway, while waiting to be seen. Each ambulatory has six full time family medicine physicians. Two physicians are always present, and they rotate every three hours so that the ambulatory is able to operate continuously from 9:00 AM until 6:00 PM, five days a week. A nurse is assigned to each physician; coverage questions are decided by consensus at weekly staff meetings. When they are not on duty at the clinic, physicians perform home visits. Each physician is responsible for a particular panel of patients; and patients have the home telephone number of their physician, in order to be able to call for help or information when the physician is off duty. Monthly meetings with specialists at CH1 are an opportunity for the family physicians' continuing education.

Each ambulatory sees about 120 patients per working day, or approximately 2500 visits per month (25 percent of the catchment area's population). These figures imply annual utilization of about three visits per capita. Between 5 and 10 percent of visits result in referrals to a specialist or to the hospital.[6] Direct interrogation of more than 100 persons waiting to see a physician at the two ambulatories revealed that the largest group (20 percent) were routine visits, which often are required in order to satisfy legal requirements for work; and 12 percent had come to see the dentist. Leaving aside these two groups of patients, the reasons given for attendance (respiratory illness, heart trouble, fever, hypertension, gastrointestinal illness, diabetes) were similar to those normally found in Western countries. A larger sample of patients surveyed after leaving the ambulatory showed a similar pattern of illness.[7] If, as seems likely, the patterns of illness for Ukraine are similar to those reported from other countries, then, for the present, international data can be used for initial planning purposes in Ukraine.

2.2 Improved Work Attitudes by Physicians and Staff

Work ethic. All physicians reported that now, compared to the previous system, they: worked longer hours, saw more patients, enjoyed an expanded scope of practice, and experienced greater job satisfaction. The reasons given for greater job satisfaction were: they saw a greater variety of illnesses than before, they felt more comfortable in managing these illnesses, and they enjoyed developing relationships with their patients.

Shorter waiting times for patients. The physicians took pride in the fact that patient waiting times now averaged less than 15 minutes.

Patient education. Observations of patients visiting specialists in the polyclinic revealed that physician-specialists actually discouraged their patients from assuming responsibility for their health, did not allow discussion of the illness or its management, and gave no opportunity for the patient to ask questions. By contrast, in the family medicine ambulatories discussions with patients occurred frequently, and patients were often educated about their illnesses. A survey of more than 100 family medicine patients waiting to see their family physician found that patients want education and that family physicians understand this. More than 95 percent of the patients said that their doctor gave them an opportunity to ask questions; and more than three-fourths said that the doctor understood their [the patients'] questions and that they understood the physicians' answers. According to the survey, more than half of the patients (55 percent) said that they went to the physician for information, while the remainder of the visits (45 percent) were motivated by a desire for diagnosis and/or treatment.

[6] These numbers—on utilization and rates of referral—are similar to figures reported for much of Western Europe and North America. The figures do not include home visits, however; otherwise, utilization rates probably would be significantly higher.

[7] Hrubiy, Serhiy. *Family Medicine Patient Satisfaction Survey, 3 volumes.* Ukraine Marketing Group, Lviv, 1996.

2.3 Administrative Autonomy

Lessons from around the world show that decentralizing management and financial responsibility to those managers closest to the operations improves efficiency and effectiveness. Such managers understand best the needs of both patients and staff. Although administrative autonomy does not necessarily depend on a facility's location, a relatively remote operation enhances both the need for, and likelihood of, autonomy.

Recent experience in L'viv provides further evidence for these generalizations. In 1989, as a part of a decentralizing process, L'viv City Polyclinic No. 2 granted its Family Medicine Department, located within the main clinic building, a measure of fiscal autonomy. However, in the ensuing years economic pressures necessitated progressive withdrawal of this autonomy, to the point that none currently exists. The early success of the Family Medicine Department also dissipated, roughly in parallel to the loss of autonomy, and satisfaction of the Department's patients (as shown below) is less than that of the CH1 ambulatories' patients. The absence of administrative autonomy has resulted in the Department's inability to provide incentives and also a comparatively less effective use of space and personnel. The result is that patients perceive a less friendly and less caring environment in the Family Medicine Department than they do in the case of the ambulatories. The heads of L'viv City Polyclinic No. 2 recognize the problem and plan to rectify it by moving the Family Medicine Department to a free standing location.

2.4. A Team Approach

Although physicians are key to any health care system, the overall health of a population cannot be attributed solely to the quality of physician services. The smoothly functioning clinical team in L'viv's Varshavska ambulatory consists of physicians, nurses, and technicians who, by working together, have facilitated innovative changes.

Pre-planning. Before the ambulatory opened, clinical personnel by mutual consent joined to paint the facility's interior and to plant flowers and shrubs alongside the approach to the facility, considerably enhancing the attractiveness and cleanliness of the environment.

Family medicine nurses. Nurses received an added two months of training in order to become family medicine nurses; as a result, they actively participate with the physicians in the care of patients. Being more directly involved in patient care makes the nurse a more effective partner in the provision of health care.

Nurse activity. Nurses attend the physician, record the patient's history and physical examination, take notes, and write prescriptions which physicians then sign. They accompany the patient to the clinic laboratory, administer injections, facilitate other treatment, and supplement health education. These are all novel activities for Ukrainian nurses.

Friendliness and kindness. Patients put a high priority on friendliness and kindness in the ambulatory setting. In fact, the Patient Satisfaction Survey indicated that, of the criteria used to assess physicians' professional performance, patients valued friendliness (80

percent) and kindness (64 percent) well above other criteria, including physician intellect (35 percent) and his/her knowledge of diagnosis (35 percent), drugs (36 percent), or treatment (35 percent). Each member of the ambulatory's staff contributes to the clinic's environment. When nurses move in and out of examining rooms, this brings them into repeated contact with patients waiting in the hall and facilitates communication between patient and provider. Name tags worn by the nurses at Varshavska are an added personal touch. The physicians' schedule, which is posted at the ambulatory's entrance, helps to inform patients as to when their family physician is expected to be present.

2.5 Continuity of Care

A key element in effective primary care is the continuous partnership between a competent health provider and the patient.

Evidence of continuity. Of patients interviewed directly at both ambulatories, 63 percent said they always saw the same physician, and only 2 percent said they never saw the same physician. Continuity of care is developing at the ambulatories. By contrast, the chance observation of four consecutive patients seen by polyclinic specialists revealed that, in each case, the physician was seeing the patient for the first time.

Satisfaction with the patient/physician partnership. The Patient Satisfaction Survey showed that, in contrast to visits to specialists at the polyclinic, patients at the ambulatories wanted to retain the same physician and, further, would recommend the facility to other potential patients.[8] Physicians at the ambulatories thus generated greater patient satisfaction than did the primary care providers at City Polyclinic No. 2. Such satisfaction obviously is crucial, if patients are asked to pay user fees to the ambulatories at some point in the future.

Reduced need for ancillary services. Development of a partnership between physician and patient has reduced the need for ancillary services. For example, since the ambulatories were opened, the number of ambulance calls in the regions served by these providers has fallen; on weekends, they have virtually ceased. Patients indicate that they see no need for the clinics to remain open 24 hours a day. Confidence in the physician and the availability of telephone contact during off-hours relieve patients' anxiety. The patients know where to turn to for help, and that the advice they receive will be in their best interest.

Reduced need for referral. Development of a partnership between patient and physician is likewise an important factor in reducing the need for referrals. As shown below, patients of the ambulatories were referred to specialists at less than half the rate as patients of internists and pediatricians at the polyclinic; the rate of hospital referrals for patients of the ambulatories also was less than half that of internists' patients. When a patient knows his/her physician and has confidence in the advice given by that physician, the patient's demand for referral is likely to fall.

[8] *Ibid*.

Continuity of care helps to prevent illness, because the increased level of trust between the patient and his/her physician allows for more effective patient education regarding healthy life styles. In areas served by the ambulatories, immunization rates are higher than elsewhere, and mortality rates for men of working age have been falling.

These findings are consistent with experience in the United States and Britain, where continuity of care has been shown to help the family physician: properly evaluate a patient's vague complaints, distinguish major from minor illnesses, establish which complaints arise from life styles or emotional problems, determine whether risky procedures are indicated, and monitor the effects of treatment. "The *sin qua non* of family practice is the knowledge and skill which allow the family physician to confront relatively large numbers of unselected patients with unselected conditions and to carry on therapeutic relationships with patients over time".[9]

2.6 Patient Satisfaction Survey

In Table 1 below, responses from patients of the Pol'ova ambulatory are compared with those of patients of internists and pediatricians at L'viv City Polyclinic No. 2, as collected during the Patient Satisfaction Survey. As indicated, the ambulatory's patients generally were more positive in their responses than the patients of the polyclinic's primary care providers.

[9] Stephens G.G., "The intellectual basis of family practice," *Journal of Family Practice* 2 (1975): 423-428.

Table 1. Comparing Patient Satisfaction Among Family Medicine Physicians, Internists, and Pediatricians at City Hospital No. 1, L'viv, Ukraine.

Interview Question	Indicated Response	Family Medicine Ambulatory	Internist	Pediatrician
What was facility hygienic condition?	Good	65%	56%	58%
Would you return to this facility?	Yes	82%	77%	68%
Would you recommend this facility?	Yes	80%	47%	38%
What is physician professional level?	High	79%	58%	53%
Was the physician friendly?	Yes	84%	69%	69%
Was the physician kind?	Yes	62%	49%	40%
Were you educated about your condition?	Yes	84%	67%	67%
Are you willing to change doctors?	No	86%	76%	69%
How many visits to reach a diagnosis?	One	85%	62%	60%
Should the facility be open 24 hr./day?	Yes	40%	62%	77%
Were you hospitalized in the last year?	Yes	9%	19%	5%
Were you referred to another specialist?	Yes	16%	41%	37%

3.0 Economic and Business Aspects

The innovations in family medicine described above were launched with the expectation of imminent reforms in health care financing that were to include new payment methods designed to stimulate a more cost-effective use of resources. In practice, planned changes in national, oblast, and city policies have been delayed, although limited experiments with salary incentives and a partial reallocation of budgetary allocations have been permitted. It would be fair to say that the successes achieved so far can be attributed primarily to the insight and commitment of health professionals seeking to improve access to quality and cost-effective health care. Further expansion of these successes at the national level will require significant reforms in both macro- and microeconomic conditions.

3.1 Paying Primary Care Group Practices

CH1's family medicine ambulatories operate under an agreement with the hospital administration that spells out quality standards and the parties' mutual expectations. Family physicians and nurses are paid according to a salary incentive system based on intensity points and quality indicators. This system emphasizes the relative value of home visits, examinations of pregnant women, immunizations, ENT and ophthalmic manipulations. Some attempt is being made to also link these incentives to referral rates. The average family physician's salary is 1.6 times higher than that of a regular, full-time-equivalent physician, while the average family medicine nurse's salary is 1.4 time higher than that of a regular, full-time-equivalent nurse. When awarding bonus pay, preventive care activities and their results are taken into consideration.

3.2 Private Sources of Funding for Primary Health Care

Primary health care should be promoted with public and private funding. User fees can be used to generate additional resources that can be re-invested in primary health care and to provide services which are currently unavailable due to severe budgetary constraints. In establishing prices for services at family medicine ambulatories, it is important to retain an overall price structure that keeps prices lowest at ambulatory providers and highest at inpatient providers, in order to discourage patients from by-passing primary health care centers. At CH1, fees were introduced first in the polyclinics and inpatient departments rather than in the family medicine ambulatories. Eventually, small fees will also be introduced at the clinics, since patient satisfaction surveys show that patients are willing to pay for some services such as medicines, special diagnostic tests, and urgent care.

3.3 Transfer of Budget Authority to Family Medicine Groups

In Ukraine, as in other countries, reforms in health care financing that create macro- and micro-economic incentives designed to increase the cost-effectiveness of health care—such as alternative payment systems and salary incentives—probably will result in heightened competition among primary health care group practices. For example, health care facilities probably will compete to enroll the insured members of any mandatory health insurance fund system. Indeed, ambulatories already are competing for contracts with enterprises. Also, ambulatories need to attract paying patients. All of this means that

primary health care group practices are going to have to expand their business management capabilities in order to survive in newly competitive markets.

In preparation for health care financing reforms, including the likely introduction of some form of per capita-based budgeting as proposed in L'viv, CH1 is taking some preliminary steps to decentralize budget authority to its family group practices, in order to encourage their expansion and efficient use of services. Most health facility budgets do not separate budgets by major subunits, by departments, or by associated family group practices. At CH1, basic cost accounting techniques are being used to separate the budget of the family medicine ambulatories from that of Adult Polyclinic No. 2 which supervises the ambulatories. Creating separate budgets for each primary health care group practice is important because such budgets serve as the most basic planning tool. Separate budgets also provide a mechanism for ensuring that operations are going as planned and to identify areas where corrections are needed. Decentralized budgeting systems provide useful information, regardless of the payment system being used, but clearly will become more important, insofar as the family group practice obtains increased autonomy, competes more aggressively for new business, and obtains access to additional sources of non-budget funding.

3.4 Enhanced Business Management Systems

New payment systems will result in more financial and management autonomy for family medicine or small multi-specialty group practices; and these practices, as a result, will need to establish sound business management systems in the areas of accounting, budgeting, productivity measurement, and marketing.[10] In all of these areas, good performance will depend critically on a reliable and efficient management information system, the core of which is a patient encounter data form designed to capture information on key patient identifiers and the characteristics, procedures, diagnosis, referral patterns, and physicians associated with the encounter. An example of such a form now being tested and computerized at CH1 is presented in Box 1 below. This form provides all the data necessary in order to monitor group practice volume, budget performance, staff productivity and non-budget revenues earned. Standard reports should be designed as part of the computer software program so that they can easily be produced by the practice manager on a weekly or monthly basis as needed.

[10] Purvis, G. *Family Group Practice and Mandatory Health Insurance Fund Developments in the Issyk-kul Oblast, Karakol, Kyrgyzstan*. USAID Zdrav*Reform*. Abt Associates. May 1996.

Box 1. Patient Encounter Form

-Patient name
-Medical record number
-Diagnosis code
-Procedure code
-Patient Benefit Status
-Source of payment (or free service)
-Type of referral made
-New patient or existing patient
-Date of visit
-Treating physician
-Referral physician
-Price of service
-Price of medicine
-Total price
-Date of last entry

3.5 The Group Practice Manager

In order to implement the new business management tools outlined in the previous sections, an individual "practice manager" or staff must be designated, whose job is to maintain the financial and clinical information systems for the family medicine group practice and to provide the physicians with information needed for decision-making. These reports are also submitted to the chief physician and chief economist of the supervising health facility, who use the information as needed for official purposes. The Practice Manager is responsible for the internal control and integrity of all information and financial systems.

A variety of staffing arrangements can be used to ensure performance of this function. For example, the head physician of the group, the chief nurse, or a deputy economist might be given the job on a part-time basis; or, an new employee might be hired on a full-time basis to act as Practice Manager for a network of 2-3 ambulatories. CH1 is considering using members of its financial support staff to fulfill these new responsibilities.

4.0 THE IMPACT OF FAMILY MEDICINE

In the first year of operations of L'viv's first family medicine ambulatory, the productivity of the clinic's physicians rose significantly. The number of patients seen by the average family physician increased 1.5 times, the number of phone calls answered doubled, and a total 1,674 patients were provided with emergency care. During weekends and holidays, the ambulance service made no house calls in the areas served by the ambulatory; instead, the clinic's family medicine practitioners responded to these urgent calls. Development of a partnership between physician and patient reduced the need for ancillary services. In addition, data indicate that family medicine physicians perform early pregnancy exams more frequently than do hospital-based physicians (83 percent versus 77 percent). The hospitalization rate for patients of the ambulatories appears to be lower than that of patients at the hospital's adult polyclinic (1.2 percent versus 3.6 percent). And family physicians refer their patients to other specialists six times less often than does the average district internist! Experience to date shows that family physicians find obstetrics and gynecology to be the most difficult to master in their new roles, but they are nonetheless able to provide family planning assistance.

CH1's early success in family medicine can be attributed to support from the L'viv oblast and city health administrations, to the strategic decision by the hospital's chief physician to deliberately experiment with new ways of providing efficient and effective health care, and to the dedication and perseverance of the ambulatories' staff, despite numerous obstacles.

The overall impact of the ambulatories can be seen and appreciated in the changes registered in a number of overall performance indicators for CH1, as presented below in Table 2. The efficiency of inpatient services appears to be improving. Occupancy in the inpatient unit of the hospital in 1995-1996 was much closer to full capacity than in the early 1990s. Also, average length of stay has fallen and is now about 20 percent below the figure for the city as a whole (15.4 days). While there have not been any substantial changes in outpatient service indicators, immunization rates have risen from 85 percent in 1993 to 100 percent in 1996, and the improvement probably can be directly attributed to the family medicine clinics.

Table 2
CH1: Basic Service Utilization Statistics, 1992 - 1996*

Indicator	1992	1993	1994	1995	1996 **
Inpatient Statistics					
Beds	360	292	290	240	240
# beddays	118,456	108,310	102,490	92,907	41,038
Occupancy rate	73.93	99.91	94.44	103.1	100.5
Discharges	7,787	7,390	7,841	7,450	3,343
ALOS	15.1	15.2	13	12.4	12.2
Polyclinic visits					
Total visits	1,106,756	1,162,962	1,077,554	1,094,000	466,957
Adult visits	601,451	570,359	528,575	765,689	222,820
Child visits	157,683	165,809	163,696	328,799	175,469
Home visits	88,722	104,838	92,228	107,975	68,488
# outpatient surgery	--	--	2,197	2,712	1,015
Vaccination rate (DPT)	--	85%	95%	100%	100%
Mortality Rate	0.6	0.47	0.30	0.30	0.30

* Utilization rates are based on the catchment area's 1994 official population: 146,500.
** January - June 1996 only