

REPRODUCTIVE HEALTH RESOURCE EFFICIENCY STUDY IN UKRAINE 2001–2002

Case study based on research conducted at the city and
rayon levels in Kamianets-Podilsky in Khmelnytsky
Oblast and Svitlovodsk in Kirovograd Oblast

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Executive Summary

A. Introduction

The Policy Development Group (PDG) is an intergovernmental, multisectoral network that developed the National Reproductive Health Program 2001–2005 (NRHP), which was adopted by Ukraine on March 26, 2001. The PDG is committed to improving reproductive health (RH) services in Ukraine, both in terms of quality and access. Identifying and devising strategies to reduce operational policy barriers is a key component of this mandate. In 2001, the PDG identified 26 operational policy barriers to improve RH services.¹ Some of the barriers could be addressed immediately through Ministry of Health (MOH) policies or Orders and, consequently, the PDG worked with the MOH to draft Orders that outline the first steps for enhancing efficiency, improving quality, and setting standards of clinical practice in the RH sector.

Other barriers, however, require further study to identify root causes and develop concrete recommendations for policy change. In particular, the PDG identified the inefficient use of resources—financial, human, and material—as the most significant barrier to providing quality RH care in Ukraine. In the context of constrained resources for health care, countries and communities must get the most out of their investments and, therefore, must work to ensure better and more efficient use of existing resources.

The purpose of this study was to provide the PDG with evidence that operational policy barriers result in inefficient resource use in RH care in Ukraine and to recommend solutions. The analysis will serve as the foundation for recommendations that the MOH will make to the Cabinet of Ministers on ways to remove the existing operational policy barriers. In addition, the study will be used at the city and rayon levels to improve the efficiency with which individual facilities provide RH services.

The study, funded by the POLICY Project, was conducted by Medical Management and Audit (MEDMA), a Ukrainian consulting firm in collaboration with the POLICY Project. The specific objectives of this study were to analyze, understand, and recommend solutions to the following problems:

- Inefficiencies at the facility level in the areas of staff time use, bed capacity and use, and availability and use of supplies and equipment;
- Inflexibility in allocating funds for health care from local budget and financial decision making at the facility level;
- The shadow economy in health care from the client perspective (and its relationship to inefficiencies in financial resource allocation); and

¹ Operational policies are the rules, guidelines, operating procedures, and administrative norms that governments use to translate national laws and policies into programs and services. These policies may pose barriers to service delivery due to a lack of policy guidance, misguided design of the policy, or misguided implementation of an appropriate policy (Cross et al., 2001).

- Poor quality of care from the client perspective (and its relationship to inefficiencies in health care facilities).

B. Methodology

This study focuses on selected RH facilities at the city and rayon levels in Kamianets-Podilsky city in Khmelnytsky Oblast and Svitlovodsk city in Kirovograd Oblast. Each of the facilities included in the study provides care for around 100,000 people, which is typical of Ukraine. These cities also represent different regions of Ukraine—Kamianets-Podilsky is located in western Ukraine and Svitlovodsk is located in eastern Ukraine. In Svitlovodsk, the city and rayon health services have been merged for many years; whereas in Kamianets-Podilsky, the city and rayon facilities are separate, but duplicative. Fieldwork for the study was conducted between December 2001 and April 2002. The methodology used seven different modules, which are outlined in section II, Methodology, of this report.

C. Findings

Lack of flexibility in financial decision making

The five facility managers interviewed indicated that budget funds generally meet less than one-half of the facility's operational budget, considering current staffing and bed numbers in the facility. Most of the health care budget is spent on salaries and social insurance contributions,² and other budget items are either severely underfinanced or not financed at all. As a result, funds allocated to essential medications and supplies used to provide care typically cover only some of the drugs that the country is required to provide to vulnerable groups. For example, in the city of Kamianets-Podilsky, allocations to the "salary" and "social insurance contributions" line-items accounted for 86 percent of the 2002 city health care budget allocation. Other sources of financing, such as client payments for drugs and supplies, equipment donations, and charitable contributions must be used to fill the gap in financing.

Staff availability and utilization of working hours

As described above, two MOH Orders mandate the number and type of staff that should be available in each facility. When operating in accordance with these Orders, health care facility managers do not have the authority to make decisions about the facility's patient flow and staffing needs. As a result, in many facilities, there are more staff than required to provide services.

Findings from Module 1 indicate that there is an insufficient workload for providers in both the inpatient and outpatient setting. For example, physicians on the second shift at the Women's Consultations spend approximately 33 percent of their time on patient care. There is also a low workload for inpatient physicians with only 43 percent of their time being spent on patient care. As mentioned earlier, this is a result of the policy link between the number of beds in a facility and the number of staff. Since there is a large number of unused beds in health facilities and

² Social insurance contributions are contributions to the national pension fund, unemployment fund, and workman's compensation fund that are taken from each employees' paycheck.

health facilities are staffed based on the number of beds, the number of staff far surpasses the current needs of the population. In addition, there is no system of staff planning in place that takes into account the differences in patient flow by day of the week and time of the day.

All staff in the facilities studied spend a great deal of time on administrative tasks that are either unnecessary or could be performed by non-medically trained personnel. For example, in some facilities and departments, there are too many records and journals being kept. In one department, researchers were shown 86 journals that midwives and nurses were required to complete each day. In addition, these journals were checked for completion by a nurse. In some departments, these journals include a requirement to document the exact time each day that a piece of equipment is switched on and switched off or the exact time that a room is cleaned.

While these are striking examples of insufficient workloads among these particular staff, there is a bigger picture in which the staff operate. In general, all staff face insufficient workloads. Thus, doctors are found providing services to patients that could be performed by nurses or midwives. For example, at antenatal clinics direct work with patients and other manipulations (except for injections) are exclusively performed by physicians, while midwives play an extremely passive role—only searching for medical records, recording test results, preparing rooms, and so forth. In turn, nurses and midwives serve the function that paraprofessional staff could provide—both administrative and procedures associated with patient care. These highly qualified staff could lose their medical skills and qualifications without practice.

Bed capacity and use

As described above, an MOH Order mandates the number of beds that should be available in each facility. When operating in accordance with this norm, health care facility managers do not have the authority to make decisions about the facility's bed needs. Also, oftentimes the length of stay in hospitals in Ukraine is unnecessarily long or a client remains registered in the hospital even after he or she has already left the facility. These unjustified delays in discharging clients are used to maintain a sufficient number of registered bed-days³ in the department and justify a higher number of beds and staff than necessary. This means that inpatient facilities are providing services that could be provided in an outpatient setting or in the client's home in order to artificially increase the number of bed-days.

Module 3, the client presence (Bed Utilization) check included in these studies, demonstrates that there are many more beds in inpatient departments than are required to meet the local population's existing needs. For example, of 368 clients that had not undergone a surgery or childbirth but were registered in the hospital, only 231 (63%) were physically present in inpatient departments at the time of the assessment. Through Module 4, Length of Hospital Stay assessment, researchers found that in general inpatient facilities are providing services that could be provided in an outpatient setting. This is illustrated by a widespread practice of hospitalizing patients that could be cared for in daycare units of outpatient facilities (in accordance with Annex 14 of MOH Order #503, enacted on December 28, 2002). Both Modules 3 and 4

³ A bed-day is a unit of measure that signifies that a hospital bed was occupied for one day. In the Ukrainian context, bed-days are linked to funds spent on utilities, sanitation, supplies, food, laundry, and staff.

demonstrate that in the current RH system there are problems with client management and referral. For example, clients may be hospitalized unnecessarily to undergo tests that could be conducted in an outpatient setting, and then remain in the hospital until or even after test results are received. Clients may unnecessarily refer themselves to the inpatient facility rather than first approaching their outpatient providers. Clients may also have to wait long periods of time to see their physician or the head of the department before being discharged. In Svitlovodsk, 70 percent of clients in the gynecological department were diagnosed in the hospital rather than in an outpatient setting. Other than in acute cases or during labor and delivery, testing and diagnosis should generally be provided in an outpatient setting to avoid unnecessary hospital stays. Diagnostics could also be provided in the inpatient facility on an outpatient basis, in order that outpatient facilities do not duplicate diagnostic capacity in the inpatient facility.

The assessments also found that a significant percentage of clients are kept in the hospital too long (unwarranted delay in discharge). According to expert assessment, in the maternity ward, 25 percent of clients were kept in the hospital too long. Among all patients referred to the Pathology of Pregnancy Department, only 48 percent were actually admitted to the inpatient setting, while 52 percent were sent home after being examined by a physician in the inpatient department. Thus, according to the physicians in the inpatient facility, the condition of those patients did not require hospitalization at that time. According to this study, 10 percent of the clients admitted to the Pathology of Pregnancy Department did not require hospitalization.⁴ In addition, in the Gynecology Department, 63 percent of clients were kept in the hospital too long. The cases of prolonged stay in the Gynecology Department included in this study alone resulted in 391 days in which a bed was occupied unnecessarily or “unnecessary bed-days.” This was more than 40 percent of all bed-days included in this assessment of Gynecology departments. Through a detailed review of a sample of inpatient client’s medical records (Module 4), this study shows that unwarranted delays in discharge from the hospital accounted for 20 percent of all bed-days assessed. These bed-days are tied to money spent on sanitation, supplies, food, and staff. It is important to note that, according to Module 3, not all of the clients admitted to the hospital actually stay in the hospital for their entire admission period.

In addition, by reviewing outpatient medical cards (Module 5), the assessment team found that the number of patients that a physician in the outpatient facility serves in a year is approximately three times less than stipulated by general standards included in MOH Order #503 (December 28, 2002).⁵

Availability of equipment and its use

At the moment, the line items for purchasing and maintaining equipment are rarely sufficiently financed since the majority of budgetary funds are used for salaries and utilities. Thus, it is important for the facilities to use and purchase equipment such that these scarce resources are used efficiently.

⁴ Based on the experts’ assessment using Annexes 14 and 18 of MOH Order #503 (December 28, 2002).

⁵ This Order stipulates that the maximum length of a visit to the OB/GYN should be up to 20 minutes (for example, for the first antenatal visit of the pregnant woman and for some specialized receptions using additional methods of examination.)

Although the facilities included in this study do have the essential equipment required to provide RH care, the lack of some modern diagnostic equipment limits the facility's diagnostic capacity, which in its turn negatively impacts the quality of diagnostics available to the population and the speed and quality of treatment that the population can receive for RH problems.

Analysis of the actual use of equipment to provide RH services (Module 5) verifies that equipment is being used inefficiently in each of the facilities studied. For example, on average during this period, one ultrasound machine provided services for an average of 6.2 examinations per day. If the ultrasound machine were used to its capacity for a two-shift working day, at least 20–25 examinations could be provided in one day.⁶ Facilities could provide better services and use resources more efficiently by using fewer, well-functioning ultrasound machines over longer shifts.

Finally, Kamianets-Podilsky Central Rayon Hospital currently has the capacity to provide laparoscopic surgery, but the laparoscope is underutilized—used in only about 85 surgeries per year—and is not used for gynecological surgeries. In addition to using the equipment more efficiently, the wider use of laparoscopes in surgery can reduce hospital stay significantly.

Client payments for RH care

Considering the deficits at which most health care facilities in Ukraine operate, approaches or mechanisms to fund RH care and improve efficiency of the use of financial, human, and material resources must be found. In many cases, clients provide drugs and supplies necessary for their care, including syringes, sheets for hospital beds, and food during the client's hospital stay. Most facilities request “charitable contributions” from clients to help defray costs. In addition, some providers demand direct payments (unofficial ones) from patients to provide health care or to improve the quality of care that the client receives. Given that many clients make charitable contributions and under-the-table payments to providers, some of these clients turn out to be able to afford medical services; however, as the findings below demonstrate, the majority of clients interviewed characterize the cost of medical care as a burden. On the other hand, these funds could be used more efficiently by reinvesting them into the formal health sector.

According to exit interviews conducted with inpatient clients (Module 6), 78 percent of them had to bring some of the necessary drugs for their care to the hospital, and 96 percent had to purchase supplies for use in the hospital. Forty-three percent of these clients reported that the cost of health care at the RH inpatient facility is a burden for their family. The burden was so significant for 23 percent of clients that they have had to refuse treatment for RH problems in the past. In addition to these official payments into the health sector, 39 percent of inpatients interviewed reported providing a direct payment to health care staff. According to exit interviews conducted with outpatient clients, 6 percent of them when visiting the facility to get RH care had to bring some necessary drugs with them, and 64 percent had to purchase supplies

⁶ According to assessment by the experts of the productivity indicators included in the technical documents for each piece of equipment (“passports”), as well as of the recommendations for outpatient provision of obstetrical and gynecological care approved by the MOH Order #503, 28 December, 2002 (on the time to be spent for a specialist visit if additional examination techniques are used), on average, one ultra-sound examination and related paperwork takes 20 minutes.

and bring them to the facility. The cost of RH services has been such a burden for 16 percent of clients that there have been occasion(s) that they have decided not to seek RH care in the past.

Client perception of quality of care

In general, outpatient and inpatient clients interviewed as a part of this study expressed their satisfaction with the quality of care they received at the health facility. Two areas in particular should be of concern to the health administration—namely, the conditions of restrooms and confidentiality⁷ in the facilities. Nineteen percent of outpatient respondents and 58 percent of inpatient respondents were dissatisfied with the condition of restrooms. Confidentiality is a significant issue in the health care sector, and while few clients expressed their dissatisfaction with confidentiality, only 9 percent of outpatient respondents and 5 percent of inpatient respondents expressed that they were completely satisfied with confidentiality granted them in the health facility. In fact, 18 percent of outpatient respondents and 16 percent of inpatient respondents would not answer the question. These figures may indicate low client and provider awareness about patient’s rights, and could indicate a low level of confidentiality at the health facilities.

Outpatient and inpatient clients were asked if they had ever exercised their right to choose the physician that would provide health care. Fifty-one percent of outpatient respondents and 72 percent of inpatient respondents have exercised that right for themselves or their family. As a result, 37 percent of those outpatient respondents and 35 percent of those inpatient respondents reported that they had to pay for their chosen physician’s services unofficially (under-the-table).

Despite the fact that clients reported satisfaction with most of the aspects of their health care system covered by this survey, 75 percent of outpatient respondents and 89 percent of inpatient respondents expressed their wish to see the local health care system undergo changes. In particular, respondents would like to see changes in the way that drugs, services and supplies are being paid for; new equipment in the facilities; and a choice of health providers and facilities.

D. Overall Recommendations

The following recommendations are an abbreviated version of those at the end of this report. They were developed by the researchers using the findings from this study. In addition, in section IV, Overall Recommendations, the researchers have included recommendations that are directly related to the studies, but do not follow directly from the findings. Although this study was conducted in 15 departments located in two regions of Ukraine, circumstances in health facilities throughout Ukraine seem to mirror the conditions in these departments. Thus, we feel that many of the recommendations can be generalized and adopted in health facilities throughout Ukraine.

Decentralize financial decision making to the local and facility levels

⁷ Respondents were questioned about their general satisfaction with confidentiality in the health facility that they visited. They were not asked about specific aspects of confidentiality.

1. Rather than developing a facility budget based on inflated staff and bed numbers, outpatient and inpatient facility budgets could be developed by facility managers based on a planned volume of care according to the medical needs of a specific locality. These facility budgets could then also be disaggregated to the level of departments where they can be more easily monitored and where the funds are actually spent.
2. In order to improve the ability of the head of the facility to manage the facility and be held accountable for the quality of care that the facility provides, facility managers/administrators should be made responsible for developing and implementing budgets based on prospective payment for the care provided by the facility. The budgets should be based on the facility's real workload, which in its turn is defined by the real needs of the community.
3. A financial sustainability plan (FSP) should be prepared for all pieces of equipment before they are purchased to ensure that the equipment is needed, that the facility can afford the equipment, maintenance costs, and the cost of necessary supplies to operate the equipment. This type of plan would allow the facility to follow typical procedures for a business operation making a costly purchase.

To reduce the number of staff, beds, and facilities down to the levels adequately meeting local needs

1. MOH Orders #33 and #74, which link the bed capacity of a health facility to the population and number of staff in each facility to its number of beds, should be revised. Such a linkage does not allow facilities to manage the number of staff and beds according to their needs, resulting in a waste of scarce resources.
2. Staff types and numbers as well as bed types and numbers for health care facilities should be defined based on the actual health care needs of the community. Current beds and staff types and numbers should be optimized accordingly, which will, in turn, reduce utility costs. The excess capacity could be reduced through merging related departments or by expanding use of day care⁸ units within health care facilities.
3. In some localities, health managers may find it efficient to merge either separate facilities or some of overlapping functions performed by separate facilities. That would eliminate duplication of equipment, staff, and infrastructure.

Develop and implement the system of contracts between local governments, health facilities, and staff

1. In the place of the MOH Orders, localities could introduce a contract system for hiring health staff and commissioning a specific volume of services. Localities would have contracts with facilities, which would in turn have contracts with health facility staff and other companies that provide products and services to the facility. Instead of using the norms listed in the

⁸ In Ukraine, day care units are used to monitor clients and administer medications and treatment without admitting the client into the hospital. The day care unit may require a client to stay in the unit for a specified amount of time for a particular RH problem.

MOH Order, staff numbers for each inpatient department may be calculated based on the real patient flow and the staff skills needed to provide relevant health services. Facilities could then reduce the number of health providers working on night shifts, weekends, and holidays taking into account the actual volume of care and needs of the departments.

2. Because outpatient providers spent more than one-half their time and inpatient providers spend one-third of their time on administrative tasks,⁹ facilities could use their staff more efficiently by reducing the amount of time that health professionals spend on administrative tasks. Additional analysis should be conducted to determine the most efficient way for staff to perform administrative functions. For example, providing physicians with pre-designed fill-in forms for recording the visit and diagnosis, computerizing all medical records, and using clerical aids would allow health professionals to spend less time on administrative tasks.
3. As a part of a contract system between localities and facilities described above, facilities could be encouraged to consolidate departments during times when there are fewer cases. For example, in some facilities the Pathology of Pregnancy and Gynecology departments could be open Monday through Friday and closed on weekends. Clients from these departments that require care on the weekends could be cared for, for example, in the Maternity departments or by maternity staff. This would provide savings on staff and communal costs (utilities). Although there are currently numerous operational barriers to consolidating departments and staff, this type of simple flexibility in restructuring to meet the volume of care could be possible under the contract system.
4. Officially sanction outpatient visits with leading specialists that work in an inpatient setting, allowing them to use outpatient clinic resources. If facilities were reorganized such that staff were allowed to practice both in an inpatient and outpatient setting, there could be fewer staff, clients would be able to access their preferred physicians, and resources would be used more efficiently. In addition, the quality and timing of diagnosis, treatment, and hospitalization would likely improve as physicians would be responsible for both outpatient and inpatient care.
5. In cases where city, rayon, and privately owned facilities are located in close proximity to one another, facilities could consolidate funds to purchase equipment and meet the overall demand for services without having excess capacity. Although there are currently no mechanisms in the Ukrainian health care system for public and private facilities to collaborate and consolidate funds, these mechanisms could be studied and proposed to ensure efficient use of public and private capacity and resources.

⁹ The term “administrative tasks” can be found in the Glossary of Terms under the entry “Administrative Time.” Administrative time was divided among meetings, completing client medical records, registers, and other documentation. While the researchers acknowledge that completing client medical records is an integral part of providing quality medical care, it is not a part of working with or providing direct care to clients.

Develop alternative payment and targeting mechanisms

1. In order to ensure that those clients most in need of assistance are able to receive it, cities and rayons could develop an official system for targeting free drugs and supplies to poor clients.
2. Facilities could be allowed to charge co-payments for certain types of services – particularly for those which patients have to make under-the-table payments anyway on a scale commensurate with the type of service provided. Payments that in the past have become part of the shadow health care economy would then be invested into the facility and the care that it provides, such as providing drugs and supplies to more clients at a reduced rate. This will require special mechanisms or policies to avoid current Constitutional constraints on charging for medical care in public facilities.

Improve referral system and coordination between facilities and departments

1. Use of day care units in outpatient and inpatient settings should be established or expanded, and the practice of follow-up visits to inpatient specialists (if such clinical need arises) legalized to ensure that clients who do not require constant supervision or hospitalization are not kept in the hospital unnecessarily.
2. Outpatient care should be improved by setting clear criteria for hospitalization and more widely using diagnostic procedures according to indications. This would reduce the length of stay and number of cases hospitalized. In addition, exclude unnecessary laboratory examinations and record all lab results into client medical records.
3. Laparoscopic equipment should be introduced to RH departments, particularly in facilities where this equipment is being used by other departments.

Improve the quality of care in facilities, particularly in areas of importance to the client

1. The MOH could consider ways to address confidentiality in the guidelines and protocols that they issue to health facilities, issue posters of patient's rights to be posted in all facilities, and provide training to health care providers on confidentiality and patient's rights.
2. Expanding the client's role in choosing his or her provider rather than providing assignments would improve the client's view of the health system and would encourage providers to improve the quality of care they provide to ensure that the facility has a large number of clients.

Throughout the process of reforming the health care system, localities and facilities are advised to hold seminars for facility staff to keep them informed of reforms and the effect that reforms will have on the way that the facility operates. Staff may also require training to implement new policies and practices.

List of Abbreviations

CTG	Cardiotocograph
DV	Dermatological & Venereological – Skin & STI
FP	Family planning
FSP	Financial sustainability plan
MCH	Maternal and child health
MEDMA	Medical Management and Audit
MOH	Ministry of Health
NRHP	National Reproductive Health Program 2001–2005
OB/GYN	Obstetrician/gynecologist
PDG	Policy Development Group
RH	Reproductive health
STI	Sexually transmitted infection
TORCH	Toxoplasmosis, other agents, rubella (also known as German measles), cytomegalovirus, and herpes simplex

I. Introduction

A. Background

In 2000, the President of Ukraine adopted the Ministry of Health’s (MOH) National Reproductive Health Program, 2001–2005 (NRHP), which was developed by the intergovernmental and multisectoral Policy Development Group (PDG). The POLICY Project works with the PDG to develop reproductive health (RH) policies and programs, which included the NRHP. Since developing the NRHP, the PDG has broadened its membership and obtained authority to monitor the program’s implementation. To this end, in 2001, the PDG held a workshop to identify and recommend ways to remove operational policy barriers to providing efficient, quality RH services in Ukraine.¹⁰

The PDG first identified 26 barriers to providing quality RH services. The group began to analyze the root causes, including the policy roots, of these barriers and found that there were some barriers it could begin to resolve through MOH policies, or Orders. Recommendations for addressing some of these barriers were incorporated into the following MOH Order of Ukraine, “On improvement of outpatient obstetric-gynecologic care in Ukraine,” issued and approved at the end of 2002. In addition, the PDG is currently developing another MOH Order of Ukraine, “On improvement of inpatient obstetric-gynecologic care in Ukraine.” The MOH Orders outline the first in a series of steps necessary for improving the quality and efficiency of RH care delivery, as well as specifying clinical RH standards of practice.

The PDG also identified priority operational policy barriers that would either require further study to determine their root causes or some concrete evidence of the barriers to support policy change. The inefficient use of resources—financial, human, capital, and material—was highlighted as the most significant barrier to providing quality RH care and as a key issue that merited further study.¹¹ Inefficient resource use was divided into the following two subgroups:

- ***Inefficiencies in budget allocations.*** Inflexibility associated with budget allocation by line items leads to the inefficient use of scarce resources in Ukraine’s RH system. Prior to this study, anecdotal evidence suggested that budget decisions are made in a top-down manner with no consideration of local needs. These decisions are based on laws and algorithms that have little, if anything, to do with the actual needs of health facilities, medical personnel, and consumers. In fact, local health facility administrators have no authority to change staffing numbers, the number of beds in a department, or make

¹⁰ Operational policies are the rules, regulations, guidelines, operating procedures, and administrative norms that governments use to translate national laws and policies into programs and services. These policies may pose barriers to service delivery due to a lack of policy guidance, misguided design of the policy, or misguided implementation of an appropriate policy (Cross et al., 2001).

¹¹ In many countries, financial, human, capital, and other types of resources in the health sector are not used efficiently to achieve the health system’s goals. An inefficient use of resources can result from a variety of different situations. In some countries, this might mean that resources are not adequately targeted to the poor. For the sake of this study, inefficiencies refer to the underutilization of staff and beds, which results in a waste of funds keeping these facilities and staff operational, and the lack of financial autonomy at the facility level.

changes in budget allocations. For example, staff allocations to city and oblast facilities are linked to the number of beds defined by the MOH Orders, regardless of the actual use of the beds. Local and facility budgets are currently based on broad, restrictive line items by expenditure (such as salaries, equipment, and infrastructure) rather than interventions/services rendered.

- ***Inefficiencies in the RH care system*** occur when different inputs into RH service delivery, such as staff, bed capacity, infrastructure, equipment, facilities, drugs, and supplies, are underutilized or not matched with actual need. For example, prior to this study, anecdotal information in Ukraine suggested that some staff are idle at work, while other facilities are understaffed; equipment may be purchased unnecessarily; or necessary drugs and supplies may not be available.

Health care financing in Ukraine

Health facilities providing RH services in Ukraine are funded through national and local budgets. Research institutes and some tertiary care facilities are funded through the national budget, tertiary care facilities at the oblast level are funded through the oblast budget, and primary and secondary care facilities are largely funded through rayon and municipal budgets.¹²

Beginning in 2001 with the introduction of a formula-based resource allocation method (per capita financing),¹³ funds were allocated to cities and rayons based on their population size.¹⁴ Citizens, cities, and oblasts pay taxes into national coffers, which are then redistributed back to municipal, rayon, oblast, and national budgets. At the municipal level where health services are provided to the majority of patients, per capita spending on health care from the budget amounts to 70 hryvnas (approximately US\$12.76) annually.¹⁵ In many parts of Ukraine, city residents are not the only clients that visit municipal facilities. For example, in Kamianets-Podilsky, the city has estimated that in the first quarter of 2002, 13 percent of its clients were actually tax-paying residents of the rayon.¹⁶ In these cases, clients from the rayon are bypassing the rayon facilities to attend municipal facilities. This may happen for a variety of reasons, such as better quality services, a preferred physician, or specific equipment available at the municipal facilities. The municipal facility does not receive any extra funds to treat these clients and must use the scarce resources intended for city residents to serve clients from the rayon.

¹² According to the Law of Ukraine, “On the state budget for the year 2002,” although municipal and rayon-level health care facilities serve more than 80 percent of all patient needs, they receive only 57 percent of Ukraine’s entire health care budget. Oblast-level facilities receive 30 percent of the overall health care budget, and national facilities receive 13 percent of the overall health care budget.

¹³ Decree No. 1195 of the Cabinet of Ministers of Ukraine from September 5, 2001, “On approval of formula for distribution of inter-budgetary transfers (equalizing subsidies and funds passed over to the state budget) between state and local budgets.”

¹⁴ Prior to the formula-based budget allocation system, budget allocations to cities and rayons were at the discretion of the oblast administration. Allocations to oblasts were at the discretion of national authorities. Criteria included such factors as the size of the administrative unit (city or rayon), the previous year’s budget, and the level of resources that the administrative territory contributed to the center.

¹⁵ Law of Ukraine, “On the state budget for the year 2002.”

¹⁶ These clients may choose to go to the municipal facility because it is closer to them than the rayon facility or because in some cases it provides better quality of care. The money allocated for these rayon residents’ health care does not follow them to the municipal facility, but remains in the rayon facility’s budget.

While budgetary funds are currently distributed down to cities and oblasts using a per capita formula, health facilities continue to be funded according to outdated norms that distribute funds based mainly on the number of bed-days for inpatient services and the number of patient visits for outpatient services. This type of budget allocation in a system in which staff and beds are underutilized creates unwanted incentives for physicians to lengthen hospital stays and the number of visits in order to increase bed use.

In the current health care system, many policymakers and providers note that the budget deficit is the primary cause of clients' and providers' dissatisfaction with health care.¹⁷ However, the chronic problem of insufficient funds for RH and health care overall cannot be solved by increasing resources alone. The budget deficit not only reflects a shortfall in government funding, but also inefficient use of scarce resources, which leads to massive waste. A budget deficit makes it even more vital that existing resources be used efficiently. The lack of available resources is one of the most prominent factors in limiting Ukrainian citizens' access to services, hindering the health sector's ability to improve the quality of care and provide modern health care services and techniques, and indirectly encouraging the shadow health sector to thrive. As Lekhan et al. (2002) notes: "The existing approaches to distributing funds within the health sector turn the problem of financial deficit into one that cannot be resolved even if the general economic situation in the country improves."

Inefficiencies in financing and RH care provision

Two policy roots that contribute to inefficient resource use are MOH Order #33, "On staff norms and typical staff numbers in health care facilities," enacted February 23, 2000; and MOH Order #74, "On reference norms on inpatient care needs for children, care for pregnant and postpartum women, and gynecological care," enacted March 24, 1998. When operating in accordance with these Orders, health care facility managers do not have the authority to make decisions about the facility's staffing or bed needs. Instead, MOH Order #33 mandates a specific number of staff based on the number of beds in the facility, and MOH Order #74 mandates a specific number of beds per population. If the health facility manager adjusts the number of beds or staff to be less than the Orders require, the facility may receive fewer funds the following year.

Health facility managers have an incentive to report a certain number of days spent in inpatient care or patient visits to outpatient facilities to maintain their facility budgets, but have little incentive to reduce the number of visits per client or shorten the duration of hospitalization. The facility may keep a patient in the hospital longer than necessary or may require extra follow-up visits to "improve" service statistics. In addition, some service providers require "under-the-table" payments for their services. These providers have a personal economic incentive to maintain patients in the hospital or clinic unnecessarily. Thus, the current system of health financing does not encourage health facilities to provide high-quality services and wastes scarce resources (Lekhan et al., 2002).

¹⁷ Researchers found this through personal communication with policymakers and providers during this study.

The original purpose of these norms under the former Soviet system was to develop health care into a large, integrated network of facilities and to increase use of health care services (Lekhan et al., 2002). However, in the current market economy, this network cannot be sustained and is an inefficient use of scarce resources, resulting in informal client payments for drugs, medical supplies, and care.

These norms also affect health facility operations. For example, the city of Kamianets-Podilsky has a population of approximately 100,000. Pursuant to the mandate for five obstetric beds per 10,000 population, the city facility should have 50 obstetrical beds; in fact, there are 60 obstetrical beds. At the same time, there were only 820 births in the city in 2001, or 2.2 births each day. Despite the lack of demand, the city maintains the appropriate number of staff to serve all 60 obstetric beds in the facility. The funds spent to maintain staff unnecessarily could otherwise be used to provide better quality services, improve access to RH care, pay for much needed drugs and supplies for RH services, and provide repairs to equipment and infrastructure. These and other laws and practices need to be reviewed to determine how they may be modified to ensure more rational, need-based budgeting and more rational use of financial, human, capital, and material resources.

In addition to these barriers, the PDG identified the need to better understand the effect of the shadow health economy in which clients are required to pay for services intended as “free” by the Constitution of Ukraine. Such client payments take several forms: charitable contributions to the health facility, purchase of drugs and supplies, and under-the-table payments to medical staff. These payments can cause a financial burden to clients and may serve as a barrier to their seeking preventive services, such as RH care.

Finally, the PDG identified quality of care as an issue related to inefficiency at the health facility level. For example, since many clients must pay full price for drugs and supplies, they choose less expensive products that may not be the most effective. The public sector is unable to subsidize drugs and supplies for a large percentage of the population because a majority of funds are spent to support more staff and beds than are needed to provide RH care to the population. For example, the city of Kamianets-Podilsky spent 3.5 percent of their 2001 budget on drugs and medical supplies.

B. Goal and purpose of the study

The purpose of this study was to provide the PDG with evidence that operational policy barriers result in inefficient resource use in RH care in Ukraine and to recommend solutions. The analysis will serve as the foundation for recommendations that the MOH will make to the Cabinet of Ministers on ways to remove the existing operational policy barriers. In addition, the study will be used at the city and rayon levels to improve the efficiency with which individual facilities provide RH services.

The study, funded by the POLICY Project, was conducted by Medical Management and Audit (MEDMA), a Ukrainian consulting firm in collaboration with the POLICY Project. The specific objectives of this study were to analyze, understand, and recommend solutions to the following problems:

- Inefficiencies at the facility level in the areas of staff time use, bed capacity and use, and availability and use of supplies and equipment;
- Inflexibility in allocating funds for health care from local budget and financial decision making at the facility level
- The shadow economy in health care from the client perspective (and its relationship to inefficiencies in financial resource allocation); and
- Poor quality of care from the client perspective (and its relationship to inefficient resource use in health care facilities).

II. Methodology

A. Study sites

This study was conducted in selected RH care facilities at the city and rayon level in Kamianets-Podilsky city in Khmelnytsky Oblast and Svitlovodsk city in Kirovograd Oblast. Each of the facilities included in the study provides care for about 100,000 people, which is typical of Ukraine. The majority of Ukraine’s population lives in cities of this size. The two cities represent different regions of Ukraine—Kamianets-Podilsky is located in western Ukraine and Svitlovodsk is located in eastern Ukraine. The cities also differ in how services are provided at the city and rayon levels. In Svitlovodsk, the city and rayon health services have been merged for many years; whereas in Kamianets-Podilsky, city and rayon facilities are separate, but duplicative. The rayons are administrative units within the oblast that occupy larger territories than the city that they surround. These two cities were chosen because the city leaders are known to be progressive regarding social reform and are likely to use the results of the study in their health care reforms.

The types of facilities included in the study were the following:

1. Women’s Consultation (family planning, antenatal care, gynecological care)
2. Dermatology/Venereology (DV) Dispensary and Inpatient Facility (STIs/HIV)
3. Three departments in the Women’s Hospital:
 - a. Pathology of Pregnancy (high-risk pregnancies)
 - b. Gynecology (including RH cancers, surgeries, and infertility)
 - c. Maternity (labor and delivery)

In the city of Kamianets-Podilsky, the main facility for the purpose of RH care is city Center for Maternal and Child Health Care (MCH Center), which is located on the edge of the city. The MCH Center houses the Women’s Consultation and Women’s Hospital (also known as the Maternity Home). The Women’s Consultation is an outpatient clinic where clients receive antenatal care, gynecological checkups, and family planning (FP) services. Within the Women’s Hospital, the three main inpatient RH departments include the Pathology of Pregnancy Department, which serves women with high-risk pregnancies or complications during pregnancy that require hospitalization; the Gynecology Department, which serves women with gynecological problems such as menopause disorders, RH cancers, infertility, and endometriosis; and the Maternity Department, which provides labor and delivery services. The MCH Center

also houses a Children's Hospital. The city provides both inpatient and outpatient skin and STI care in the Dermatological-Venereological (DV) Dispensary, which is located in a separate part of town from the MCH Center. In the past, clients with STIs were compelled to stay in the DV inpatient facility until they were cured of their STI as a means of stopping the spread of infection. This may have required weeks or months of stay in the inpatient facility. As of 1995, this practice is no longer in use; however, the inpatient facilities still exist.

RH services at the city level are literally duplicated at the rayon level in the Central Rayon Hospital, which has a Women's Consultation and the same three departments offering RH services. The Central Rayon Hospital is located directly across the street from the city's MCH Center. The rayon facility provides services for clients from across the rayon, excluding residents of the city of Kamianets-Podilsky. The municipal and rayon governments could use funds more efficiently by merging these facilities to save money on staff, equipment, maintenance, and utilities. Outpatient skin and STI care for the rayon residents is provided at the DV room (office) of the polyclinic at the Central Rayon Hospital. To get inpatient skin and STI care, the rayon residents should visit the oblast DV Dispensary located 100 km away at the oblast center.

In Svitlovodsk, RH services are offered by the same range of facilities as in Kamianets-Podilsky; however, the city and rayon facilities are merged. Thus, the city and rayon health budgets together provide RH services for residents both in the city of Svitlovodsk and in the rayon territory. The Women's Consultation is located 2 km apart from the Women's Hospital. However, DV facility is located in another part of town, quite remote from the center of town and other facilities. Providing STI services in a remote location and separately from other primary health care facilities not only poses an access barrier, but may also prove to be a barrier to client's seeking services. Clients may be less willing to attend a facility that is exclusively for DV problems than a facility that provides a wide range of services.

B. Instruments used during the study

MEDMA and POLICY used a range of methods to study the operational policy barriers to efficient resource use described above. Study techniques included methodologies used internationally, such as observation, questionnaires administered in interview format, and review of medical records and documents. Seven data collection modules were used in this study:

- Module 1: Time Motion Assessment
- Module 2: Provider Interview on Time Utilization
- Module 3: Bed Utilization
- Module 4: Length of Hospital Stay
- Module 5: Availability of Inputs for RH Care
- Module 6: Client Exit Interview
- Module 7: Facility Management Survey of Financial Decision Making

Some of the modules also include subsections to acknowledge differences between facility departments.

Module 1: Time Motion Assessment

Sample size: 67 providers (30 physicians and 27 midwives and nurses)

22 of these providers work in outpatient settings

45 of these providers work in inpatient settings

Number of observations: 134 (977 hours observed)

The main purpose of the time motion assessment was to measure the distribution of staff time among patient care, administrative duties, and idle time to ascertain if staff spent their time efficiently. In addition, for time spent in patient care, the time motion assessment captured the type of RH service being provided, the type of visit (primary or follow-up, type of complaints), and the supplies used for each client visit.

The observational time motion approach, developed by Frederick Taylor in 1911, has been used throughout the world to measure time use in a variety of settings, including the health sector. Information on clinician time use can be used to calculate the staff cost of providing health interventions and assess the efficiency of staff and resource use. The time motion approach is typically considered to be one of the most accurate methods since it uses careful observation and documentation rather than self-reporting by the provider; however, the time motion approach is the most time-consuming and costly methods of measuring clinician time use.¹⁸

Assessment of administrative time is time that staff spend on additional functions not included in direct work with clients. Administrative time was divided among meetings, completing client medical records, other registers, other documentation, and fulfilling other administrative tasks.¹⁹ Idle time was divided among a number of categories, including bathroom breaks, food breaks, chatting, sitting (doing nothing), sleeping, smoking, talking on the phone for personal reasons, and waiting for test results.

At each facility, doctors, nurses, and/or midwives were observed (Table 1). Two of each type of provider was observed in each facility/department, with a few exceptions. For example, in the Women's Consultation, one FP specialist and two OB/GYNs were observed. In the Maternity Department, a neonatologist was observed in addition to two obstetricians. Other exceptions are noted in Table 1 (some facilities do not have nurses and others do not have midwives).

Providers were selected as follows. The head of the facility was first asked to name the most productive and least productive worker in each category. These two staff members were excluded from the sample. For the rest of the staff in that category, two (or one, as appropriate) were randomly chosen.

Each service provider was observed individually for her/his two shifts. Shifts ranged from 6 to 6.5 hours for doctors and from 8 to 12 hours for nurses and midwives. The shifts observed were selected randomly for each 24-hour period. Each service provider was observed on the busiest

¹⁸ Bratt, John H., James Foreit, Pai-Lien Chen, Caroline West, Barbara Janowitz, and Teresa De Vargas. *A comparison of four approaches for measuring clinician time use*. *Health Policy and Planning* 1999 14: 374-381.

¹⁹ While the researchers acknowledge that completing client medical records is an integral part of providing quality medical care, it is not a part of working with or providing direct care to clients.

and slowest day at each facility.²⁰ During the observation, the expert observer noted the service provider's activity on an interval of every three minutes. In addition, the observers noted the number of clients that the provider served during the observation period. This was later compared with data from medical records collected through Module 5 as a verification tool, and was not reported in the study findings.

Observations were conducted at 15 facilities or departments that provide RH services. Six of these facilities were outpatient clinics that provide RH services. Four of these are located in Kamianets-Podilsky at the city (2) and rayon (2) levels, and two are located in Svitlovodsk at the merged city/rayon level. The team observed 22 outpatient providers for 270 working hours in these outpatient facilities. The time motion assessment was also conducted at 12 inpatient departments that provide RH services. Eight of these are located in Kamianets-Podilsky at the city (4) and rayon (4) levels, and four are located in Svitlovodsk at the merged city/rayon level. The team observed 45 inpatient providers for a total of 707 working hours in inpatient RH departments.

Module 1 was conducted throughout the fieldwork period to avoid observer fatigue. Observers were as unobtrusive as possible when observing service providers. There was no interaction between the provider and observer. To the extent possible, any actions that would alter the service providers' behavior in the presence of the observer were avoided.

²⁰ From the researchers' experience, Monday is typically the busiest day (the number of clients with health complaints built up over the weekend) and Thursday is the slowest day in health care facilities in Ukraine.

**Table 1. Sample Selection for Module 1: Time Motion Assessment:
Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001–2002)**

Type of Facility	Kamianets –Podilsky			Svitlovodsk		
	Doctor	Nurse	Midwife	Doctor	Nurse	Midwife
	city			city/Rayon		
Women’s Consultation (outpatient)	Two OB/GYNs FP specialist		Three Midwives	Two OB/GYNs FP specialist		Three Midwives
<i>Inpatient departments in the Maternity Hospital:</i>						
Pathology of Pregnancy	Two OB/GYNs		Two Midwives	OB/GYN		Two Midwives
Gynecology	Two OB/GYNs	Two Nurses and one Surgical nurse		Two OB/GYNs	Two Nurses	
Maternity	Two OB/GYNs Neonatologist	Two Neonatal nurses	Midwife/ maternity Midwife/ general	OB/GYN	Three Neonatal nurses	Midwife/ maternity Midwife/ general
DV (inpatient and outpatient)	Two DV specialists	Two Nurses		Two DV specialists	Two Nurses	
Rayon						
Women’s Consultation (outpatient)	Two OB/GYNs		Two Midwives			
<i>Inpatient departments in the Maternity Hospital:</i>						
Pathology of Pregnancy	Separate department does not exist in this facility					
Gynecology	Two OB/GYNs	Three Nurses				
Maternity	Two OB/GYNs Neonatologist	Two Neonatal nurses	Midwife/ maternity Midwife/ general			
DV (inpatient and outpatient)	DV specialist	Nurse				

Module 2: Provider Interview on Time Utilization

Sample size: 66 providers in 15 departments

Another method of analyzing staff time involves provider recall through an interview. Interviews with providers about the use of their shift time have been conducted throughout the

world as a simple, inexpensive way to measure clinician time use. On its own, the provider interview approach is not considered to present valid results since it may be biased by provider recall as well as an incentive for the provider to report being busier than he or she was in reality.²¹ The team conducting this study chose to use a provider interview to complement the time motion assessment as another way to measure the use of the provider's time, and to ask additional questions such as the provider's opinion on the efficiency with which their shift time is used.

To complement the information collected in the time motion assessment, a provider interview on time utilization was also conducted with 66 of 67 providers included in Module 1. One provider was not interviewed because after Module 1 was conducted, he/she left Kamianets-Podilsky for a long time. This short questionnaire asked providers how they divided their time between patient care and administrative duties. In addition, providers were asked if they thought their time was used efficiently and how they thought their time could be used more efficiently.

The questionnaire was administered to providers after all observations for the time motion assessment had been conducted in the city, so that they would not inform other colleagues of the purpose of the observation—to assess the time actually spent in patient care, administrative duties, and idle time. The observer personally administered the questionnaire. No information or prompting based on time motion was conveyed to the service providers as they responded.

Module 3: Bed Utilization

Sample size: All inpatient beds and client records in 12 inpatient departments at two points in time.

It is a regular practice in many hospitals in Ukraine to allow clients that do not require constant monitoring to go home in the evenings and on weekends. These clients remain registered in the hospital to maintain a higher number of bed-days used in the facility. Module 3 was designed by MEDMA and POLICY to check for the presence of clients in inpatient RH departments to ascertain if some clients were registered, but not present in the hospital. In addition, the bed utilization check was to help identify whether hospital beds were being used for social protection cases (generally the elderly) who may need social or medico-social care rather than costly hospital or equally costly secondary care, but on whom scarce resources are spent due to lack of adequate social services. The bed check methodology is based on an audit tool designed by MEDMA for previous studies.²²

The bed utilization check was used in conjunction with Module 4 to ascertain the need for hospitalization and if some clients remained in inpatient departments for unnecessarily long periods of time. Researchers visited all inpatient facilities/departments at the city and rayon level in both cities (eight in Kamianets-Podilsky and four in Svitlovodsk) for two days each,

²¹ Bratt, John H., James Foreit, Pai-Lien Chen, Caroline West, Barbara Janowitz, and Teresa De Vargas. *A comparison of four approaches for measuring clinician time use*. *Health Policy and Planning* 1999 14: 374-381.

²² MEDMA. 2001. "Аналіз ефективності комунальної системи охорони здоров'я м. Кам'янця – Подільського та програма її оптимізації." (Analysis of the efficiency/effectiveness of the health care system in Kamianets-Podilsky and programs for improving its efficiency/effectiveness.)

once in the afternoon (weekend) and once after 6 p.m. (weekday) to conduct a presence check of clients in hospital beds. The activity was carried out over the course of the fieldwork period.

Module 4: Length of Hospital Stay

Sample size: 240 client records in 12 inpatient departments from various times during the reference year

Module 4 included a detailed review and analysis of information from inpatient records to determine whether the length of hospital stay and laboratory tests ordered were justified given the client's medical condition. The researchers assessed the need for each medical intervention and the length of hospitalization based on existing regulatory acts²³ and the researchers' own medical backgrounds and professional knowledge.

Assessments of client medical records have been used throughout the world for issues ranging from malpractice suits to death audits. For example, health management organizations, hospitals, NGOs and governments may conduct random reviews of medical records to assess providers' use of standards of care. Law firms and legal advisors may conduct a detailed review of medical records to support a malpractice claim.

This module collected information about reasons for hospitalization, tests conducted, surgeries, treatment, and discharge/death. Reviews were conducted in all inpatient facilities/departments—eight in Kamianets-Podilsky and four in Svitlovodsk—and included all Pathology of Pregnancy, Gynecology, Maternity departments, and DV Inpatient Department. Twenty randomly selected client records were reviewed per department for a sample size of 240 (12 facilities times 20 client records). The records were selected from different seasons during the year to ensure that there was no bias in length of stay based on the time of year—five from December/January, five from April/May, five from July/August, and five from October/November. MEDMA's medical experts and OB/GYN (who is also a POLICY consultant) analyzed the collected information.

Module 5: Availability of Inputs for RH Care

Sample size: 15 departments

Through interviews with the heads of 15 departments in the studied facilities, the input assessment module captured information on the characteristics of staff and the availability and financing of (functioning and nonfunctioning) equipment, supplies, and drugs. Information was collected about the standard staff, equipment and supplies mandated for each department. This was compared to those actually available for use. In addition, the instrument was used to collect information on the resources used to purchase the drugs, supplies, and equipment, and examined the reasons behind the equipment purchases that had been made by the facility over the previous year.

²³ These regulatory documents include the “Provisional standards of therapeutic-diagnostic process in the inpatient facility,” approved by the MOH Order #266 (of July 27, 1998) and PDG materials related to the MOH Order (of December 28, 2002), “On improving outpatient obstetric-gynecological care in Ukraine.”

In addition, the input availability module recorded the number of visits for each type of RH service and intervention (e.g., in the Women's Consultation, the number of visits for FP/IUD insertion and the number of visits for various aspects of antenatal care, such as immunizations and ultrasound). These numbers were obtained by reviewing all client records for the department during a two-month period (e.g., October and November 2001) in 15 departments in Kamianets-Podilsky and Svitlovodsk. Numbers in these records were compared to the number of visits recorded in facility service statistics.

Module 6: Client Exit Interview

Sample size (outpatient and inpatient departments): 291 clients

114 clients who had received outpatient services

177 clients who had received inpatient services

Exit interviews have been used around the world in health care settings, including studying quality of care in family planning.²⁴ This methodology provides a quick and inexpensive way to assess client perceptions on a variety of issues.

The client exit interview used in this study was designed to collect information on payments made by clients for services they received, both in the form of charitable contributions²⁵ and shadow payments.²⁶ Clients were also asked about the effect of out-of-pocket payments on their family's use of health care facilities and drugs. In addition, the exit interview elicited clients' perceptions of quality of care and their perceptions of city health reforms.

This module has two versions—one for clients who had received service in outpatient departments (Women's Consultation and DV Department) and the other for clients who had received care at inpatient departments. Interviews with inpatient clients were conducted at the clients' home. All clients were asked if they were willing to voluntarily participate in the exit interviews. Outpatients were approached for the survey directly after they left the facility. If they refused, the next client was asked. If they participated, once the interview was over, the next client to exit the facility was approached.

Module 7: Facility Management Interview on of Financial Decision Making

Sample: Five facility heads

This in-depth interview was designed to give facility managers an opportunity to elaborate on their perceptions and personal experiences with the financial decision-making process for health care—both at the national/oblast/city/rayon levels and at the facility level. In-depth interviews have been used worldwide throughout different areas of research, and are usually associated with

²⁴ Williams, Timothy, Jessie Schutt-Ainé and Yvette Cuca. June 2000. *Measuring Family Planning Service Quality Through Client Satisfaction Exit Interviews*. International Family Planning Perspectives, 2000, 26(2):63-71.

²⁵ Charitable contributions are 'voluntary' donations that clients make to facilities upon receiving services. In most facilities, clients are informed – either personally or by written posters, – about the standard charitable contribution for each type of service. These contributions are made to the facility's pay desk.

²⁶ Shadow payments refer to those payments given directly to a provider rather than to the facility cashier and that are pocketed by the provider rather than used for the client's care. These payments are illegal in Ukraine, yet many service providers use these shadow payments to supplement their low income.

smaller sample sizes than surveys. As the name implies, in-depth interviews, are designed to elicit more information on a topic (through use of open-ended questions) than can be obtained in a large survey.

Heads of five RH facilities were questioned about their opinion of the financial decision-making process for health care—both at the national/oblast/city/rayon levels and at the facility level. Heads of the MCH Center, Central Rayon Hospital and city Hospital in Kamianets-Podilsky, and the DV Dispensary and Central city/Rayon Hospital in Svitlovodsk were included. The in-depth interview was also used to elicit the facility heads' opinion about potential plans to decentralize the budgeting process down to the facility and lower levels.

C. Fieldwork

The fieldwork, conducted by MEDMA staff, took place from December 2001–April 2002 after all necessary clearances and permissions were obtained from the MOH, rayon health administrations, city governments, and health facilities to carry out this study.

D. Analysis

After the data were collected using Modules 1–7, the information was entered into the SPSS, a statistical software package, and Excel spreadsheets. Using the Excel spreadsheets and statistical software, the data collected was analyzed with a view to

- Identify inefficiencies in the facility activities;
- Study causes for these inefficiencies; and
- Compare results among all facilities.

E. Limitations of the study

The modules in this study use different data collection methods, including interviews and observations. As such, results of interview modules may be subject to biases of personal opinion and recollection. Although time motion studies are widely accepted as a research tool, during the time motion assessment (Module 1), providers may have altered their behavior even though the observers made every attempt to be unobtrusive. In addition, Module 5 included a review of all medical records available during a two-month period. While medical records for inpatient clients typically remain in hospital archives, the researchers estimate that approximately one-half of all outpatient medical records are missing from the clinic registry at any given time. Some medical records are kept by clients, as is the case for pregnant women, and other records were missing from the facility's general registry for some other reasons, and were, thus, left out of the study.

While an attempt was made to include into the study representative types of facilities, providers, and clients, this study did not use random sampling techniques and thus the interpretation of the findings as representative of all RH services in the two locations should be exercised with

caution. Although, however, the study was conducted in four regions, and is not representative of all RH care facilities throughout Ukraine, in the researchers' opinion, many facilities throughout Ukraine operate under similar circumstances.

F. Organization of the findings

Section III, Results, provides the findings of this study, which considers a variety of aspects of RH service provision and resource allocation and use from the perspective of both providers and clients. It is also based on an array of different data sources, including direct observations, in-depth interviews, and analysis of client cards and other records. The findings presented here are organized as follows: (1) Lack of Flexibility in Financial Decision Making (Module 7); (2) Staff Availability and Utilization of Working Hours (Modules 1 and 2); (3) Bed Capacity and Its Utilization (Modules 3 and 4); (4) Availability of Equipment and Its Use (Module 5); (6) Client Payments for Reproductive Health Care (Module 6); and (7) Client Perception of Quality of Care (Module 6).

III. Results

A. Lack of flexibility in financial decision making

Budgetary decision making at the local and facility levels

Local budget allocations to health care facilities are currently based on the facilities' performance in the previous year measured against certain indicators. As was explained in the Introduction section, hospital budget allocations are dependent on whether bed-days norms were met in the previous year, and outpatient clinic budget allocations are dependent on whether the planned number of patient visits was met. For example, in inpatient facilities, an ideal bed-occupancy rate is 340 days per year; however, the reported bed-occupancy rate for Kamianets-Podilsky city facilities in 2002 was 274 days per year. This approach to budget allocation, which neither takes into account the actual number of patients treated in the hospital or outpatient setting nor the cost of managing the case, encourages unnecessary prolongation of the patients' stay in the hospital as well as upward distortions in the number of visits to the outpatient clinic.

According to a survey of the managers of facilities in Kamianets-Podilsky and Svitlovodsk (Module 7), while facility managers can provide information on the budget needs of their facility to the local health administration, the final budget figure is linked to norms and is contingent upon available funds. Available health care funds are far below what the facilities need to operate. The funds deficit is exacerbated by the fact that facilities must maintain more beds and staff than actually needed to serve the population (according to the MOH Orders described earlier). As Table 2 demonstrates, the five facility managers interviewed in this study indicated that available government funds generally meet less than one-half of the facility's operational budget. Other sources of financing, such as client payments for drugs and supplies, equipment donations, and charitable contributions, must be used to fill the gap in financing.

Table 2. Percentage of Facility Expenditures Covered by City and Rayon Budget Allocations: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001–2002)

Facility	Percentage of expenditures covered by city and rayon budget allocations
Kamianets-Podilsky MCH Center	not answered ²⁷
Kamianets-Podilsky city Hospital (DV facility is financed through this hospital)	45
Kamianets-Podilsky Central Rayon Hospital	45
Svitlovodsk Central Rayon Hospital	37
Svitlovodsk DV Dispensary	47

²⁷ No response was received from the facility manager.

Local health sector budgets are structured by line item. Rather than breaking the budget down into line items that specify type of care, such as RH, pediatric, or cardiovascular care, line items in local budgets provide detailed guidance on how the funds must be spent by the facility. Examples of these line items include salaries, utilities, transportation, equipment purchase, equipment maintenance and repair, drugs, and medical supplies. Since funds are currently inadequate to meet the needs of health care facilities, the concept of “protected” budget line items was introduced in Ukraine to denote those expense line items that should not be reduced when budgetary allocations for the facility are cut down. The list of “protected” line items in the state and local budgets is defined by the Law on the State Budget of Ukraine or by decision of local council respectively. The list may include the following budget line items: salaries, social insurance contributions, drugs and bandages, meals for patients. Because of budget constraints, however, even protected line items are not fully funded.

Given budget constraints, a majority of funds available for health care is spent on the protected line items, and other budget items are either severely underfinanced or not financed at all. For example, in the city of Kamianets-Podilsky, allocations to the “salary” and “social insurance contributions” line items accounted for 86 percent of the 2002 health care budget. As a result, funds allocated to essential medications and supplies used to provide care typically only cover some of the drugs that the country is required to provide to vulnerable groups (i.e., insulin, growth hormones, vaccines, drugs for veterans, and Chernobyl victims). Also, old or broken equipment may not be replaced and clients may have to purchase or forego essential medications and supplies for their care or abandon medical treatment completely. According to the Module 7 interviews, funds allocated to essential medications and meals cover only 5–20 percent of actual need. During the interviews, one facility manager stated his preference for how the budget should be structured:

“Even if [the budget] is not financed 100 percent, [the financing] should be proportionate by all line items.”

This facility manager’s statement demonstrates his awareness that health facility cannot properly function under inflexible disproportions in the facility budget. For example, fully funding utilities without sufficient funding for repairs and maintenance on equipment and infrastructure will gradually deteriorate the infrastructure. Also, fully funding salaries without investments in medical technologies may undermine the quality of health care that the staff and facility can provide.

The final version of the health sector budget is approved by the local council, after which it becomes law and is to be implemented and spent as allocated by line item. Financing is provided to facilities on a monthly basis. After the budget is approved, facility managers only have the right to propose amendments to the line item structure of the budget. These proposals are considered by the executive committee of the local council. It is only after approval by the council that facility managers have the right to shift funds between the line items, thus leaving health facility managers without the right to set priorities and reallocate financial resources when the need arises to change expense line items.

During interviews conducted in Module 7, a facility manager confirmed that

“Budget planning and budget allocations are done without direct involvement of managers or chief accountants of the facilities.”

Another facility manager proposed a more effective budgeting method:

“A facility should be given an overall budget amount rather than being held to line items. This overall amount should be determined based on the volume of services provided by the facility.”

Other sources of funding

The entire budget of a public health facility is formed from a number of sources. In addition to local budgetary funds described above, funds are generated through the following sources:

- Charitable contributions
- Payment by clients for private rooms or special services
- Donations to health facilities
- International technical assistance programs
- Funds of nongovernmental, religious, and charity organizations
- Insurance company funds

In addition to these funds included in the facility’s budget, clients make payments that are not included in the overall health budgets, and, in some cases, are not a part of the official health sector. For example, clients frequently purchase drugs and supplies required for their care. Also, many clients are requested to make direct out-of-pocket payments to health care providers.

In Module 7, facility managers reported the amount of funds in their facility’s budget by source. As demonstrated in Table 3, the primary source of funding for each of the facilities is the municipal or rayon budget. In the case of the Central Rayon Hospital in Svitlovodsk, which is used by city and rayon residents, the municipal (city) budget accounted for 79 percent and the rayon budget for 12 percent of the facility’s total budget. Charitable contributions accounted for 2 percent of the consolidated budget of all facilities surveyed: from 0.1 percent in Kamianets-Podilsky to 4 percent in Svitlovodsk. Some health services (the list of which was approved by law) can be officially provided on a fee-for-service basis (this includes health checkups for drivers, teachers, service industry, and food-processing employees). Humanitarian aid and philanthropic contributions made up a small percentage of facility budgets. Svitlovodsk Central Rayon Hospital was the only facility to receive humanitarian aid—3.5 percent of the budget. Philanthropic contributions were received in Kamianets-Podilsky only.

Table 3. Sources of Funding for Health Facilities in Svitlovodsk and Kamianets-Podilsky Cities and Rayons for the Year 2000

Sources of the consolidated budget	Percentage of the consolidated budget in Kamianets-Podilsky	Percentage of the consolidated budget in Svitlovodsk
Local (municipal or rayon) budget	95.5	91.3
Charitable contributions	0.8	4
Paid services	2	1.2
Humanitarian aid from the local authorities	0	3.5
Philanthropic contributions	1.6	0
Voluntary health insurance	0.02	0

Funds generated from these other sources are used by facility managers in strict adherence to expense line items. For example, facility managers surveyed in Module 7 reported that such funds cannot be used to introduce incentives to staff for better performance. Considering that health personnel receive extremely low salaries, this type of budget and funding restriction contributes to the development of a “shadow” health care sector.

B. Staff availability and utilization of working hours

As described earlier, two policy roots that are partially responsible for inefficient allocation and use of staff are MOH Orders #33 and #74. When operating in accordance with these Orders, health care facility managers do not have the authority to make decisions about the facility’s staffing needs. Instead, MOH Order #33 mandates a specific number of inpatient staff calculated based on the number of beds in the facility, and MOH Order #74 mandates a specific number of beds per population. If the health facility manager adjusts the number of beds or staff to be less than the norms require, the facility may receive fewer funds the following year. Number of staff positions for women’s consultations is calculated based on the female population of the city or rayon.

Section 1 of MOH Order #33 reads:

“OB/GYN positions are established on the basis of one inpatient OB/GYN position per 15 obstetric-gynecologic beds.

Positions of neonatologists are established based on the calculation of one position per 25 beds for healthy newborns (including rooming-in).

Positions of midwives are calculated based on one position per 50 obstetrical and complicated pregnancy beds.

Positions of laboratory technicians are established based on the calculation of one position—per 150 hospital beds....”

MOH Order #74 states that “there should be 5 obstetrical beds per 10,000 population....”

These norms restrict facility managers from accommodating their staff and beds numbers to local needs and actual volume of care. Furthermore, the calculations included in the Order compound the level of inefficiency. Examples include the following:

- Despite the reduced fertility rate and subsequent reduction in need for obstetric services, the number of obstetric staff per population had not been changing for three years preceding this study.
- The full scope of population emigration, particularly from the western regions of the country, has not been considered in the calculations of beds and staff. Even when a census is conducted in Ukraine, information collected from households can be unreliable. For example, anecdotal evidence shows that many people with a family member who has emigrated are not willing to reveal that information to census takers or other government officials. Instead, they will report that family member as present in the household.
- The same number of midwives, nurses, and physicians are posted during an entire 24-hour period despite the fact that the work load is less during the night.
- Staff numbers were established with no consideration of the volume of services provided by private practitioners. A change in the structure of the medical environment that has taken place in Ukraine in the last 10 years has had no impact on staff numbers at oblast, rayon, and municipal health facilities.²⁸

As indicated by the results of the study, these factors have led to excessive staff numbers in the facility, insufficient workload for the staff, and inefficient use of staff's working time.

Time motion assessment measured the distribution of staff time among patient care, administrative duties, and idle time. Work with patients included counseling, examinations, procedures, and surgeries.²⁹ In addition, for the time spent in patient care, the time motion assessment captured the type of RH service being provided. Assessment of administrative time³⁰ and idle time³¹ was also divided among several categories.

²⁸ In many cities throughout Ukraine, a growing number of private practitioners are providing services in fields such as STI diagnosis and treatment, dentistry, infertility, and lab diagnostics. For example, a report by the Kamianets-Podilsky City Health Administration states that a large percentage of clients with STIs were diagnosed and treated in private facilities: 19 percent of patients with syphilis, 44 percent of patients with gonorrhea, 51 percent of patients with chlamydia, 41 percent of patients with urogenital mycoplasmosis, and 32 percent of patients with trichomoniasis. It is important to note that service statistics for private facilities are also plagued by inaccuracies and that these figures are likely even larger than reported.

²⁹ *Counseling* is an explanation provided by a doctor to a patient concerning the goals of the examination, treatment or procedure, existing risks to the patient's health, prognosis for progression of the disease, and so forth. An *examination* may consist of taking the patient's medical history, visual inspection of the patient's body, an examination using palpation or instruments, and laboratory tests. A *medical procedure* is a health care intervention that does not involve visible tissue damage such as an incision. *Operations or surgery* are curative or diagnostic procedures that involve incision or puncture of tissue and/or organs.

³⁰ Administrative time, which is dedicated to the performance of additional functions, not directly related to health care provision, is distributed among meetings and conferences, the filling out of medical records, registers/journals, other documentation, and administrative tasks.

³¹ Idle time (any time spent neither for patient care nor for administrative tasks) was divided among a number of categories, including bathroom break, food break, chatting, sitting (doing nothing), sleeping, smoking, talking on the phone for personal reasons, and waiting for test results.

Time motion assessment in outpatient setting

Outpatient providers included in the assessment spent 50 percent of their working time on administrative work, including paperwork, which took 84 percent of administrative time (Figure 1). Paperwork includes making notes in medical records (34% of administrative time), registers and journals (24%), and other documentation (24%).

Idle time accounted for 21 percent of the time assessed, the majority of which was spent sitting doing nothing (51% of idle time). In fact, part of the time that health providers would have spent idle is reflected in the administrative time since in the presence of the observer while patients were absent, providers sought to stay busy by leafing through papers, reviewing registers, and other unnecessary tasks. Direct work with patients accounted for less than one-third (29%) of all working time observed. This time included talking with patients (4% of time assessed), examining patients (19% of time assessed), and conducting medical procedures (7% of time assessed).

Figure 1. Time Utilization in Outpatient Clinics: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)

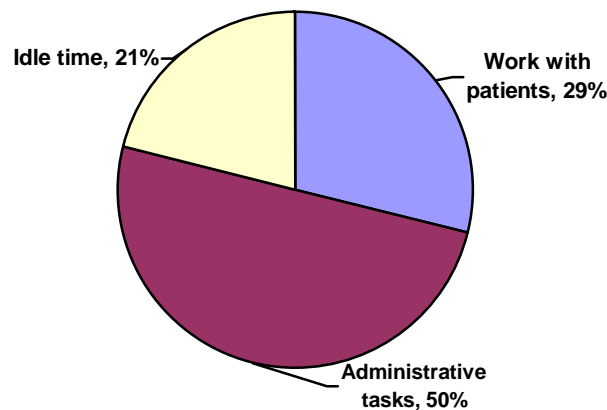


Table 4 shows that outpatient providers in the city of Kamianets-Podilsky spend the most time on patient care of all providers observed. Outpatient providers in Svitlovodsk spend nearly two-thirds of their working time (64%) on administrative tasks, although, as mentioned above, some of this is time that probably would have been spent idle had the observers not been present.

Table 4. Outpatient Providers' Time Spent in Patient Care, Administrative Tasks, and Idle Time, by Location (in percent): Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001–2002)

Location	Patient care	Administrative tasks	Idle time	N
Kamianets-Podilsky city	34	38	28	16
Kamianets-Podilsky Rayon	23	48	29	12
Svitlovodsk	28	64	8	16

N=Number of observations

Table 5 shows how outpatient providers spend their working time by department across all the study sites. Women’s Consultations and DV Dispensaries are the main outpatient facilities that provide RH and FP services; and according to this study, the providers in these facilities spend a similar amount of time with clients (28% and 29%, respectively).

Table 5. Outpatient Providers’ Time Spent in Patient Care, Administrative Tasks, and Idle Time, by Department (in percent): Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001–2002)

Department	Patient care	Administrative tasks	Idle time	N
Women’s Consultation	28	52	20	32
DV	29	47	24	12

N=Number of observations

Health staff, particularly physicians, are expected to spend some time reading medical literature and improving their knowledge and skills. During the observations, only one provider was once observed performing this type of activity. Specifically, that was an OB/GYN in the inpatient facility, getting ready – for 2 hours and 15 minutes – to pass exam to get a higher qualification category.

Of all the physicians observed in outpatient settings, DV specialists spend the most time at their workplaces idle at nearly one-fourth (24%) of their working time (Table 6). Less than one-third (30%) of their working time is spent in patient care. Although there is a high demand for STI examinations and services, public sector facilities are not equipped with modern technology and diagnostic capability. An increasing number of private STI clinics, which are generally better equipped and can provide higher quality services, are helping to meet this demand. It appears that FP specialists³² use their working time most efficiently with only 10 percent of their time spent idle and more than one-half (53%) spent with clients.³³ Midwives and nurses spend nearly one-fourth (24%) of their working time idle. Of all specialties observed, midwives spend the most amount of time on administrative tasks (65%) and the least amount of time with clients (11%). This may be due to inefficient distribution of labor between physicians and nursing staff since there are insufficient numbers of clients to keep a full staff of physicians and nurses occupied. In general, the researchers observed that the pattern of work that OB/GYNs in the outpatient facilities follow is quite similar to that of a general physician’s practice. This type of use of OB/GYN skills is not efficient.

³² These are physicians that work in the Family Planning Center of the Women’s Consultations.

³³ Two FP specialists observed during four shifts—one in Kamianets-Podilsky city and one in Svitlovodsk—were observed in the time motion assessment. They were the only FP specialists working in those facilities at the time of the assessment.

Table 6. Outpatient Providers' Time Spent in Patient Care, Administrative Tasks, and Idle Time, by Specialties (in percent): Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001–2002)

Specialization	Patient care	Administrative tasks	Idle time	N
DV specialists	30	46	24	6
FP Specialists	53	37	10	4
Midwives	11	65	24	16
Nurses	27	48	24	6
OB/GYNs	44	38	18	12

N=Number of shifts observed

In addition, there is an insufficient workload for OB/GYNs working on second shifts at Women's Consultations. The time motion assessment showed that while OB/GYNs working in Women's Consultations on first shifts spent approximately one-half of their time on patient care, physicians on the second shift spent only 33 percent of their time on patient care (Table 7). While the time spent on administrative tasks is approximately the same on the first and second shift, time spent in unproductive idle time on the afternoon shift is more than double the time spent idle in the morning.

Table 7. Time Spent in Patient Care, Administrative Tasks, and Idle Time among Outpatient OB/GYNs by Shifts (in percent): Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001–2002)

Shift	Patient care	Administrative tasks	Idle time	N
First shift (morning)	49	38	13	8
Second shift (afternoon)	33	39	28	4

N=Number of observations

Volume of care in outpatient settings

Module 5 recorded the number of visits for each type of RH service and intervention (e.g., in the Women's Consultation, the number of visits for family planning/IUD insertion and the number of visits for various aspects of antenatal care, such as immunizations and ultrasound). This information was obtained by reviewing all client records, pregnancy cards, data on prevention examinations³⁴ and other interventions performed in the department during October–November 2001 in 15 departments in Kamianets-Podilsky and Svitlovodsk. The quantities in these records were then compared to the number of visits recorded in facility service statistics. When reviewing the outpatient records, the researchers made an assumption, based both on the findings of the survey of specific health facilities and their own professional experience, that one-half the records were absent from the facility registry during the review. Based on this assumption, a corresponding coefficient was introduced in calculations. In general, outpatient records are kept in the clinic registry, but may be out of the registry at a given time when they are given to

³⁴ Prevention examination is the one that workers of some professions are required by law or by employer to undertake before being allowed the employment. For example, teachers, food processing industry workers, and medical workers must undergo certain physical examinations and laboratory tests when hired and at regular intervals during the employment.

patients who visit specialists, given to patients undergoing treatment outside of the facility, transferred from the registry to specialists, or kept by some patients for various reasons.

According to this assessment, 1,964 primary (first-time) visits, 2,986 repeat visits, 16 home visits by physicians, and 143 home visits by midwives were registered in the Women’s Consultations and OB/GYN offices (Central Rayon Hospital) in October to November 2001. The overall ratio between the primary and repeat visits is 1:1.5. Assuming that one-half of the outpatient medical records was absent from the registries during the review, the average annualized workload for one OB/GYN was 1,019 visits.³⁵ This means that the physician’s actual average workload is significantly lower than the norm set in MOH Order #503 (according to the MOH Order this indicator is approximately 6,500 client visits per OB/GYN per year).³⁶

Considerable discrepancies were revealed when comparing official statistics offered by the head doctor of the Women’s Consultation in the city of Kamianets-Podilsky with the volume of care provided at the Consultation in 2001 as calculated through the Module 5 assessment. According to Table 8, results of the study show that the number of first-time visits to the consultation was 6.2 times lower than the official number (6,048 vs. 37,533); the number of follow-up visits was 10.5 times lower (8,358 vs. 87,574); the ratio between the first-time and follow-up visits was 1:1.4 vs. 1:2.3; the physician’s workload was 4.3 times lower (1,936 vs. 8,340).³⁷

Table 8. Comparison of the Volume of Care at Women’s Consultations in the city of Kamianets-Podilsky in 2001, According to Official Statistics and Efficiency Study Findings³⁸

Operational indicators	Expert findings	Official statistics
Number of first-time visits	6,048	37,533
Number of repeat visits	8,358	87,574
Ratio of first-time to repeat visits	1:1.4	1:2.3
Physician’s workload	1,936	8,340

Note: This comparison was not made in DV facilities because a majority of patients in these facilities are not being seen for RH-related complaints.

³⁵ This figure includes all visits with/by the OB/GYN. The number of visits for two months was multiplied by six to obtain the annual number of visits. In addition, researchers made the assumption that one-half of all medical cards were not in the registries but were in the clients’ hands. Hence, the number of visits was multiplied by two. The number of visits was then divided by the number of OB/GYNs practicing in these departments to obtain the physician’s annual workload.

³⁶ According to the researchers’ assumptions based on MOH Order #503 (December 28, 2002), outpatient physicians should spend approximately 12 minutes per one visit. This assumption is based on the fact that the Order allows 20 minutes for the first (the lengthiest one) antenatal visit and for highly specialized visits requiring additional examinations. Taking into account the share of first antenatal and specialized visits in all types of visits that OB/GYNs provide, researchers assumed that OB/GYNs spent the same average time per visit as other outpatient physicians (12 minutes). Given this average time per visit, a six-day work week, time for administrative tasks, paperwork, training, sick leave days for provider, and home visits, the annual work load would be approximately 6,500 outpatient visits.

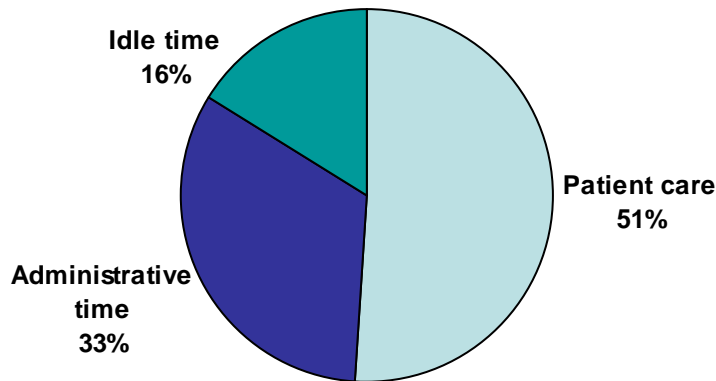
³⁷ To calculate the physician’s workload, researchers assumed that one-half of all medical cards were absent from the registries either being held by clients or for some other reason. To calculate the actual physician’s workload, the number of visits was therefore multiplied by two.

³⁸ It was not possible to make similar comparison in other health care facilities because of poor or unavailable primary medical records.

Time motion assessment in inpatient setting

Although, according to Module 1, inpatient RH care providers spent more time with clients than outpatient RH care providers do, the inpatient providers still only spent roughly one-half (51%) of their time working directly with clients (Figure 2), including performing surgeries and other procedures (70% of patient care). Administrative time consumed 33 percent of the average shift time. It was spent on completing patient medical records (45% of administrative time) and attending meetings, conferences, or seminars (15% of administrative time). Idle time accounted for 16 percent of the average shift, it was mostly spent sitting doing nothing (38% of idle time).

Figure 2. Staff Time in Inpatient Departments: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)



During the week, inpatient providers spent the most time working directly with clients on Mondays and Fridays (58% and 61%, respectively) (Table 9 and Figure 3). There was a dip in work with clients during the middle of the week and again on the weekends. Administrative and idle time generally followed an opposite pattern—as there is more work to perform with clients, less time is spent idle or on administrative work.

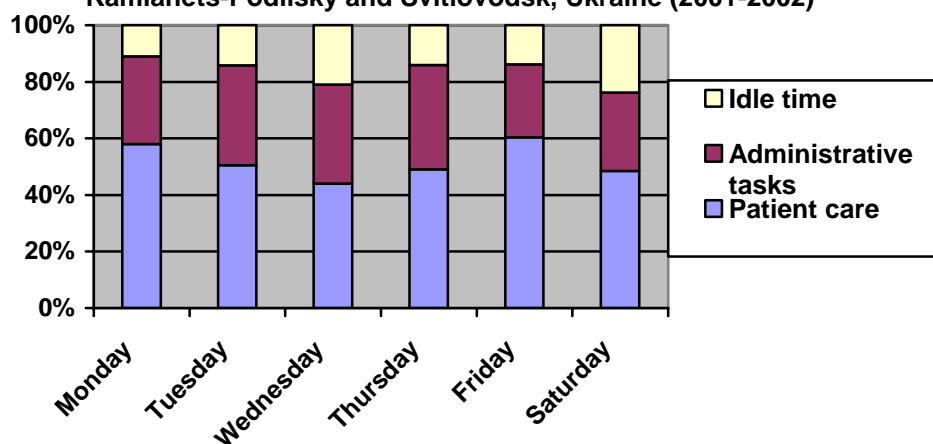
The fluctuations observed throughout the week in providers’ time spent with clients demonstrate an unstable workload in inpatient departments and an inefficient allocation of staff. There is an unjustifiably high administrative time burden on all days of the week and a large percentage of their working time is spent idle, especially on Wednesdays and Saturdays. Only 51 percent of working time on average is spent directly working with clients; however, on Wednesday, Thursday, and Saturday, this accounts for less than one-half of their shift time.

Table 9. Inpatient Providers' Time Spent in Patient Care, Administrative Tasks, and Idle Time by Day of the Week (in percent): Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001–2002)

Day of the week	Patient care	Administrative tasks	Idle time	N
Monday	58	31	11	12
Tuesday	50	35	14	29
Wednesday	44	35	21	24
Thursday	49	37	14	9
Friday	61	26	14	12
Saturday	49	28	24	4

N=Number of observations

Figure 3. Distribution of Inpatient Providers' Time on Different Tasks, by Day of Week (in percent): Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)



Inpatient providers in Kamianets-Podilsky city spent significantly more idle time than inpatient providers in Svitlovodsk and Kamianets-Podilsky Rayon facilities (Table 10). While inpatient providers in Svitlovodsk spent 61 percent of their working time working directly with clients, including procedures, inpatient providers in Kamianets-Podilsky city spent only 39 percent of their time with clients. As the next section of findings describes, this may be due to the fact that inpatient clients in the city facilities go home in the evenings and on weekends, yet remain registered in the facility.

Table 10. Inpatient Providers' Time Spent in Patient Care, Administrative Tasks, Procedures, and Idle Time, by Location (in percent): Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)

Location	Patient care	Administrative tasks	Idle time	N
Kamianets-Podilsky city	39	31	30	36
Kamianets-Podilsky rayon	54	39	7	24
Svitlovodsk	61	32	7	30

N=Number of observations

Table 11 below shows how inpatient providers spend their working time by department. In comparison with other departments, providers in the Pathology of Pregnancy departments spend the least amount of time with clients (46%), then on administrative tasks (28%), and the most amount of idle time (26%). This difference reflects the lower volume of care provided in the Pathology of Pregnancy departments. Results of Module 3, which appear in the next section of this report, show that a majority of beds in these departments are unused.

Table 11. Inpatient Providers' Time Spent in Patient Care, Administrative Tasks, Procedures, and Idle Time, by Department (in percent): Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)

Department	Patient care	Administrative tasks	Idle time	N
DV	56	33	11	8
Gynecology	52	34	14	28
Maternity	52	34	14	40
Pathology of pregnancy	46	28	26	14

N=Number of observations

Of all the specialists observed in inpatient settings, DV specialists and neonatologists spent the least time working with patients. In fact, the DV specialists and neonatologists were not observed performing any procedures during the observation period. In addition, observed inpatient OB/GYNs did not perform any procedures³⁹ on 16 out of 28 working days observed. While not performing procedures by neonatologists and DV specialists may be attributed to the “non-surgical” nature of their specialty, not performing procedures by OB/GYNs may be the symptom of their low workload in general. Also, middle-level personnel, such as midwives, neonatal nurses, and nurses in RH departments, spent a great deal more time with patients in an inpatient setting than in an outpatient setting. While midwives still spend a significant amount of idle time, their medical and client-oriented skills seem to be better utilized in an inpatient setting. This may be due to the general nature of nursing and midwifery in Women’s Consultations.

In outpatient facilities, nurses and midwives primarily provide secretarial and administrative services, whereas physicians play the clinical role, even providing services that nurses and midwives could provide. For example, nurses and midwives could provide preventive interventions and other procedures such as taking blood pressure and smears, and work more directly with patients. Midwives and nurses are not currently providing these services because there are more physicians than are needed to provide care to the clients attending the facility. This means that health services are provided at a higher unit cost since higher paid physicians are performing the duties that nurses and midwives might normally do.

³⁹ A medical procedure is a health care intervention that does not involve visible tissue damage, such as an incision.

Table 12. Inpatient Providers' Time Spent in Patient Care, Administrative Tasks, and Idle Time, by Specialties (in percent): Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)

Specialties	Patient care	Administrative tasks	Idle time	N
DV specialists	36	46	19	4
Midwives	52	26	22	20
Neonatal Nurses	60	29	11	14
Neonatologists	38	50	12	4
Nurses	56	31	13	18
OB/GYNs	45	39	16	28

N=Number of observations

Save DV specialists and neonatologists, inpatient providers in the city of Kamianets-Podilsky spend less time in direct work with patients than the providers in Kamianets-Podilsky Rayon and Svitlovodsk (Table 13).

Table 13. Inpatient Providers' Time Spent Providing Patient Care in Each Location, by Specialties (in percent): Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)

Specialization	Kamianets-Podilsky city	Kamianets-Podilsky Rayon	Svitlovodsk	N
DV specialists	40	N/A	32	4
Midwives	28	56	69	20
Neonatal Nurses	50	62	64	14
Neonatologists	40	37	N/A	4
Nurses	46	54	63	18
OB/GYNs	34	53	54	28

N=Number of observations

Self-assessment of work time use by health care personnel (Module 2)

Interviews were conducted with 66 of those providers observed during the time motion assessment (Module 1).⁴⁰ The providers were asked to provide an estimate of the amount of time that they spend with patients and on administrative tasks. According to the interviews with both inpatient and outpatient providers, one health provider on average provides services to 16 patients per day, 75 patients per week, spending between 26 and 110 minutes per patient. According to the providers, making notes in client medical records took, on average, 92 minutes per day, and other paperwork took 280 minutes weekly.

Tables 14 and 15 below show providers' estimates of how, on average, they spent the time of their working shift.

⁴⁰ One provider was out of town for an extended period of time after the observation period.

The estimates by inpatient providers were supported by the average amount of time spent on medical records during the time motion assessment (139 minutes).

Outpatient providers were also asked to estimate the amount of time per client that they spend on medical records. Their answers, which averaged 149 minutes per day across all facilities, are also supported by the amount of time spent on medical records that the researchers observed during the time motion assessment (126 minutes).

Table 14. Inpatient Providers' Estimates of How Their Working Time is Spent: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)

Average number	Kamianets-Podilsky city	Kamianets-Podilsky Rayon	Svitlovodsk
Patients seen daily	13	14	19
Maximum time per patient (in minutes)	121	143	202
Minimum time per patient (in minutes)	38	32	38
Time spent on medical records per day (in minutes)	144	104	142

Table 15. Outpatient Providers' Estimates of How Their Working Time is Spent: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)

Average number	Kamianets-Podilsky city	Kamianets-Podilsky Rayon	Svitlovodsk
Patients seen daily	18	21	16
Maximum time per patient (in minutes)	27	21	17
Minimum time per patient (in minutes)	7	7	6
Time per patient spent on medical records (in minutes)	8	6	11

In addition, providers were asked whether they think their working time was used efficiently. While 42 percent of providers reported that their work time is used efficiently and could propose no improvements, 58 percent of respondents considered that their working time is used inefficiently. These providers also offered ideas for how their working time could be used more efficiently. The following suggestions were most often cited by the interviewed providers:

- Reduce amount of time spent on paperwork (32%);
- Reduce the number of reporting and registration forms, report frequency and number of authorities that the information is sent to (24%);
- Shift from paper to electronic client data keeping forms (19%); and

- Shift the type of work that does not need licensed medical skills (filling in registers, contacting clients, writing reports, purchasing equipment and supplies, etc.) to non-medical staff such as clerical staff (10%).

C. Bed capacity and its utilization

As described previously, a policy root that is in part responsible for inefficient resource use is MOH Order #74, “On reference norms on inpatient care needs for children, care for pregnant and postpartum women, and gynecological care,”⁴¹ which states that “there should be 5 obstetrical beds per 10,000 population....”

Often the length of stay in hospitals in Ukraine is unnecessarily long or clients remain registered in the hospital even after he or she has already left the facility. These unjustified delays in discharging clients are used to maintain a sufficient number of registered bed-days in the department. This means that inpatient facilities are providing services that could be provided in an outpatient setting or in the client’s home in order to artificially increase the number of bed/days. This is illustrated by a widespread practice of hospitalizing patients that could be cared for in daycare units of outpatient facilities (in accordance with the Annex #14 to the MOH Order #503 enacted on 12.28.02).

Actual occupancy rate at departments providing RH care

Module 3 was designed to check for the physical presence of registered clients in inpatient RH departments in order to ascertain if some clients were registered, but not present in the hospital. Without advance warning, researchers visited all inpatient facilities/departments at the city and rayon levels in both cities (eight in Kamianets-Podilsky and four in Svitlovodsk) for two days each, once in the afternoon (weekend) and once after 6 p.m. (weekday) to conduct a presence check of clients in hospital beds. The assessment included 419 registered clients, of which 11 percent were registered with delivery departments, 26 percent at Pathology of Pregnancy departments, 48 percent at Gynecology departments, and 15 percent at DV departments.

The physical presence of registered clients in the hospital was analyzed by

- The client’s diagnosis;
- If a client has undergone a surgery/childbirth;
- Day of the week/time of day;
- Distance between facility and client’s home; and
- Department where the client is hospitalized.

Diagnosis

Table 16 shows the percentage of clients that were present in the hospital by major diagnosis. One-half or fewer with three of the diagnoses listed here were present, even though the hospital registry indicated that they were being hospitalized—edema in pregnancy without hypertension

⁴¹ Enacted on March 24, 1998.

(24%), high-risk pregnancy (52%), and ovarian disorders (50%). Hence, in the experts' opinion, many of these cases did not need hospitalization at the moment and probably the hospitalization was not indicated at all for their type of condition.

Table 16. Physical Presence of Registered Inpatient Clients, by Diagnosis: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001–2002)

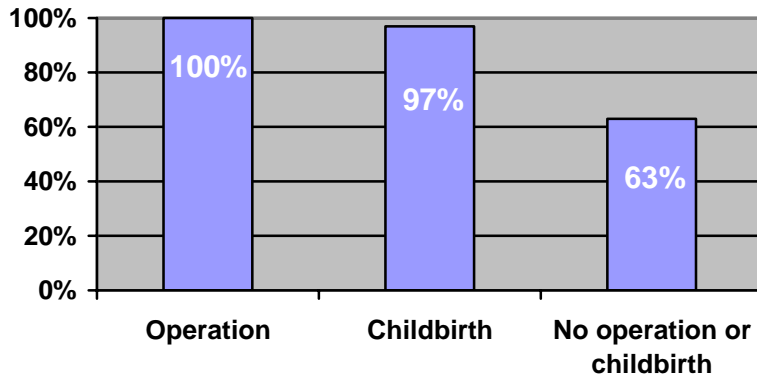
Diagnosis	Number of clients hospitalized according to registry	Number of clients present at the moment of observation	Percentage of clients present at the moment of observation
Risk of miscarriage	93	61	66
Skin disorders	64	40	62
Term delivery	39	39	100
Pregnancy edema without hypertension	25	6	24
High risk pregnancy	21	11	52
Ovarian disorders	20	10	50
Uterine fibroids ⁴²	18	14	78

Surgeries / childbirths

As demonstrated in Figure 4, of 368 clients that had not undergone a surgery or had childbirth, 231 were present in inpatient departments (63%). Of 14 clients that had undergone a surgery, all were present; and of 36 clients that had undergone childbirth, 35 were present (97%). It is expected that clients who have recently been operated on or have delivered a baby would occupy beds at all times, including nights and weekends. If a client did not have a surgery or recently undergo childbirth, she was less likely to spend the night or a weekend in the hospital. This as well as the data based on diagnosis (above) shows that, in some cases, there are a lack of adequate indications for hospitalization or staff delay in discharging clients in order to maintain a sufficient number of bed-days in the department.

⁴² Uterine fibroids are benign tumors of muscle and connective tissue that develop within or are attached to the uterine wall.

Figure 4. Physical Presence of Registered Inpatient Clients, by the Type of Procedure they Underwent (in percent): Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)



Day of the week

Observations for Module 3 were conducted on Tuesdays, Thursdays, Fridays, and Saturdays (Figure 5 and Table 17). While a vast majority of registered clients were present during the observations conducted on Thursdays and Fridays, more clients were absent than present during the observations conducted on Tuesday evenings in Svitlovodsk. Also, in the cities of Kamianets-Podilsky and Svitlovodsk, about one-third of registered clients were absent during the observations conducted on Saturdays. In general, the physical presence in Kamianets-Podilsky Rayon inpatient RH departments is high, since clients are farther from their homes and less likely to leave the facility on nights and weekends.

Figure 5. Physical Presence of Registered Inpatient Clients, by Day: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)

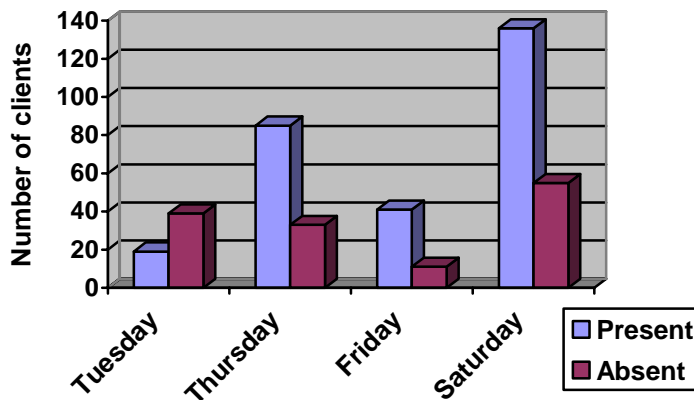


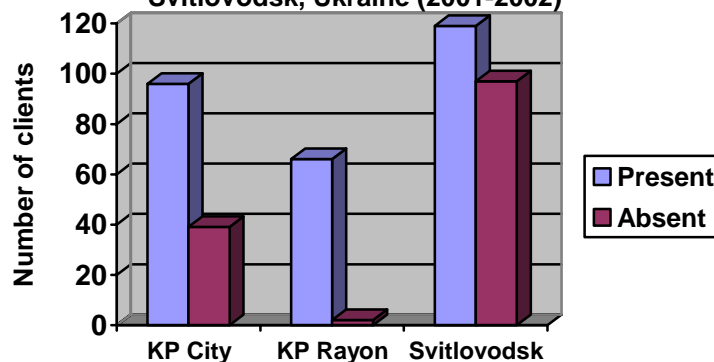
Table 17. Physical Presence of Registered Inpatient Clients, by Day of the Week (in percent): Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001–2002)

Day of the week	Number of clients present at the moment of observation	Number of clients hospitalized according to registry
Tuesday ⁴³	19	58
Thursday ⁴⁴	85	118
Friday ⁴⁵	41	52
Saturday ⁴⁶	136	191

Distance between facility and client's home

The physical presence of registered clients in the hospital was related to the distance between clients' homes and the health facility. While 97 percent of registered clients in Kamianets-Podilsky Rayon were physically present in the inpatient departments, only 71 percent of clients in the city of Kamianets-Podilsky and 55 percent of clients in Svitlovodsk were present (Figure 6 and Table 18). That is, clients living in the rayon, as opposed to the city residents, were less likely to travel long distances to their homes.

Figure 6. Physical Presence of Registered Inpatient Clients, by Location: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)



⁴³ Observations were conducted on Tuesdays in Svitlovodsk.

⁴⁴ Observations were conducted on Thursdays in Kamianets-Podilsky Rayon and Svitlovodsk facilities.

⁴⁵ Observations were conducted on Fridays in Kamianets-Podilsky city and Kamianets-Podilsky Rayon facilities.

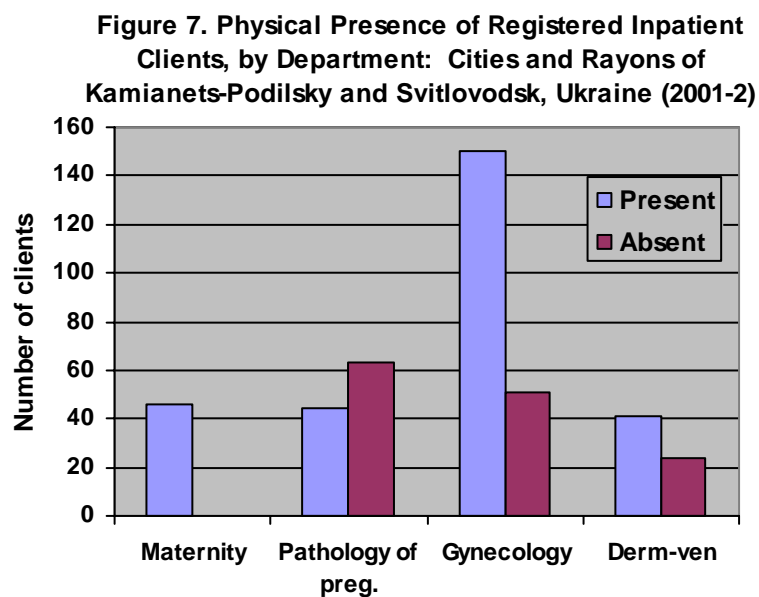
⁴⁶ Observations were conducted on Saturdays in Kamianets-Podilsky city, Kamianets-Podilsky Rayon, and Svitlovodsk.

Table 18. Physical Presence of Registered Inpatient Clients, by Location: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001–2002)

Location	Client present?		Total	Percent of clients who are absent
	Yes	No		
Kamianets-Podilsky city	96	39	135	29
Kamianets-Podilsky Rayon	66	2	68	3
Svitlovodsk	119	97	216	45
TOTAL	281	138	419	33

Department where patients were hospitalized

In the facilities included in this study, 59 percent of registered clients leave Pathology of Pregnancy departments and 25 percent of clients Gynecology departments to spend some nights and weekends at home (Figure 7 and Table 19). A majority of these clients were in departments in Svitlovodsk and Kamianets-Podilsky city. In Kamianets-Podilsky Rayon facilities, only 5 percent of clients left Gynecology departments and none left Pathology of Pregnancy departments. In all the observed departments, neither staff available during night shifts and on weekends were reduced in spite of lower workload and less clients, nor attempts were made to cluster remaining clients and selectively reduce staff and cut down on utility expenses. This study did not include an assessment of why particular departments allowed a greater percentage of clients to leave the facilities.



**Table 19. Physical Presence of Registered Inpatient Clients, by Departments:
Cities and Rayons of Kamianets-Podilsky and Svitlovodsk,
Ukraine (2001–2002)**

Department	Absent	Total registered	Absent clients as percentage of total registered
Maternity	0	46	0
Gynecology	51	201	25
Pathology of pregnancy	63	107	59
DV	24	65	37

When questioned about the absence of clients in the evenings and on weekends, health facility managers and department heads provided reasons related to inadequacies in the facility, such as a lack of heat in hospital departments, lack of hot running water, and inadequate food in the facility. As demonstrated by the above data, however, the observers found that the following factors also contribute to clients being absent from the wards:

- Unjustified delays in discharging clients in order to maintain high bed occupancy rate in the department
- Proximity of health facilities to clients' homes

Unused bed capacity in departments providing RH care

Table 20 shows that at the time of these observations a large percentage of the beds in the facility went unused depending on the type of department, location of the facility, and day of the week. In the city of Kamianets-Podilsky, the percentage of beds in the facility that was unused ranged from 27 to 93 percent, in Kamianets-Podilsky Central Rayon Hospital from 16 to 67 percent, and in Svitlovodsk from 13 to 70 percent.

Table 20. Summary of Module 3 Assessment: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)

Location	Department	Total beds in department	Day of week observed	Time of observation	Total number of patients registered in department	Total number of patients present	Percent of patients registered that were absent⁴⁷	Percent of beds in the facility that is unused⁴⁸
Kamianets-Podilsky city	DV ⁴⁹	30	Thursday	18:00	28	22	21	27
	Gynecology	30	Friday	18:00	14	14	0	53
			Saturday	14:00	31	19	39	37
	Maternity	30	Friday	19:00	7	7	0	77
			Saturday	13:00	7	7	0	77
	Pathology of Pregnancy	30	Friday	19:00	15	4	73	87
			Saturday	13:00	12	2	83	93
	Kamianets-Podilsky Rayon	Gynecology	25	Thursday	19:00	18	17	5
Saturday				12:00	22	21	4	16
Maternity		12	Thursday	19:00	4	4	0	67

⁴⁷ This is the percentage of patients registered as being in the department for treatment or observation, who are not present in the facility.

⁴⁸ This is the percentage of the total number of beds in the department that are not being used. This includes the beds that are not registered as being occupied as well as beds that are empty because some of registered patients are absent from the department.

⁴⁹ This study only includes data from one visit to the DV Department. On the second visit to the department, there were no patients admitted for RH-related problems, and, thus, the researchers chose to exclude the data from the second visit.

Table 20. Summary of Module 3 Assessment: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)

Location	Department	Total beds in department	Day of week observed	Time of observation	Total number of patients registered in department	Total number of patients present	Percent of patients registered that were absent⁴⁷	Percent of beds in the facility that is unused⁴⁸
	Pathology of Pregnancy	13	Saturday	13:00	9	9	0	25
			Thursday	18:00	9	9	0	31
			Saturday	13:00	6	6	0	54
Svitlovodsk	DV ⁵⁰	30	Thursday	18:00	32	14	56	53
	Gynecology	35	Tuesday	18:00	33	13	61	63
			Saturday	13:00	36	21	42	40
			Thursday	13:00	31	29	6	17
	Maternity	15	Thursday	18:00	6	6	0	60
			Saturday	15:00	13	13	0	13
	Pathology of Pregnancy	20	Tuesday	20:20	25	6	76	70
			Thursday	18:00	18	6	67	70
			Saturday	12:00	22	11	50	45

⁵⁰ This study only includes data from one visit to the DV Department. On a second visit to the department, there were no patients admitted for RH-related problems, and thus the researchers chose to exclude the data from the second visit.

In addition to the fact that in some departments a large percentage of beds are not used, many clients are not present in the facility, although they are registered in the hospital. In Kamianets-Podilsky, 34 percent of clients registered in the facility were not present, and in Svitlovodsk, 45 percent of clients were not present. Resources used in the departments, such as staff and utilities, are not reduced based on the actual census and needs of the department, and these resources continue to be used inefficiently.

Inefficiencies related to medical care

There are also inefficiencies in hospitalization related to the way diagnosis and treatment is provided. These can be related to

- Referral for hospitalization;
- Timeliness of diagnosis;
- Examination prior to hospitalization;
- Laboratory examinations;
- Timeliness of examination by physicians and heads of department;
- Length of hospitalization; and
- Timeliness of discharge.

In Module 4, researchers conducted a detailed review and analysis of information from 240 inpatient medical records to determine whether their referral, examinations, and length of hospital stay were justified given the client's medical condition. To this end, researchers collected information about the reasons for hospitalization, tests conducted, surgeries, treatment, and discharge/death. The reviews were conducted in all inpatient facilities/departments included in these studies—eight in Kamianets-Podilsky and four in Svitlovodsk. When assessing the appropriateness of each medical intervention and the length of hospitalization, the researchers drew on their own medical backgrounds as well as current norms, regulation, and average performance indicators for comparable health care facilities.

Referral for hospitalization

A majority of clients were referred to the hospital by an outpatient facility or physician (63% of cases). Although 52 percent of the cases assessed were categorized as urgent hospitalization (acute, non-elective), the role of the emergency care (ambulance) physicians⁵¹ in the hospitalization of these RH clients was minimal—they referred only 10 percent of those cases categorized as urgent. This may be a result of limited access among the population to ambulance service, or it may indicate that only 10 percent of those cases categorized as urgent were actual emergencies (Figure 8 and Table 21).

⁵¹ An ambulance physician is one that serves on the ambulance team. A “feldsher” (nurse) and a driver constitute the remainder of the ambulance team. These teams are assigned to 24-hour urgent care medical stations. Expenditures on ambulance services constitute a substantial share of health care budget spending (for example, 10 percent of health care funds in Kamianets-Podilsky are spent on ambulance services).

Figure 8. Who Referred the Client to the Hospital?: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)

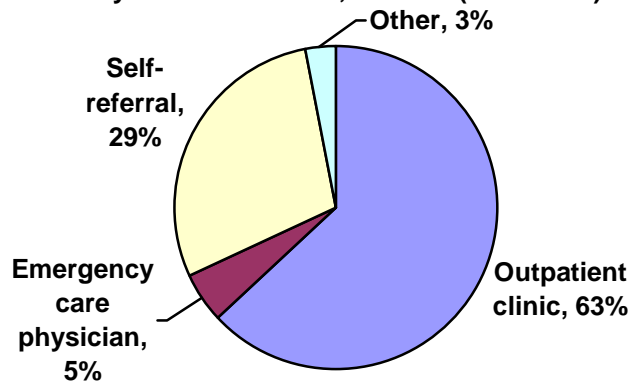


Table 21. Referrals to the Hospital: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)

Who referred the patient to the hospital?	Kamianets-Podilsky city		Kamianets-Podilsky Rayon		Svitlovodsk		Total	
	No. of cases	% of total	No. of cases	% of total	No. of cases	% of total	No. of cases	% of total
Women's Consultation	51	64	47	59	54	67	152	63
Doctor visiting home	1	1	0	0	0	0	1	0.4
Emergency care/ (ambulance) physician	4	5	5	6	4	5	13	5
Self-referral	21	26	27	34	22	27	70	29
Other departments	3	4	1	1	0	0	4	2

The overall rate of self-referrals for hospitalization is high at 29 percent of the cases assessed (Table 22). For Maternity (labor and delivery) departments, self-referrals accounted for 56 percent of cases, which may be explained by the fact that pregnant women keep their pregnancy history records at home and proceed to the maternity hospital with the first signs of labor. That high rate is to be expected uniquely in the case of labor and delivery. However, among clients in the Gynecology department, 22 percent of the cases were self-referred as well, which can be explained, in part, by the fact that inpatient physicians provide outpatient services using resources intended for inpatients. Currently, it is unlawful for inpatient practitioners to provide services to clients on an outpatient basis. Thus, clients that are referred to the hospital by these inpatient physicians providing outpatient services must report themselves as self-referred.

Doctors in Women's Consultations, where obstetric-gynecological care and monitoring for all women are supposed to be provided, are not involved in hospitalization in 36 percent of the cases. The role that outpatient OB/GYNs play is considerably reduced. Along with a high rate of self-referrals, this attests to that clients are often missing quality outpatient follow-up, as well as preventive and early stage interventions. Disease develops without medical supervision, and it is the client who chooses the time for visiting a health facility thus losing precious time.

Table 22. Self-referrals by Departments: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001–2002)

Department	No. of cases self-referred	Self-referrals as percentage of all hospitalizations
Maternity	44	63
Pathology of Pregnancy	4	5.7
Gynecology	18	26
DV	4	5.7

The high rate of self-referral in hospitalization could lead to an inefficient use of inpatient resources. In cases where there is poor outpatient follow-up, this can result in complications or worsening of a medical condition because of the lack of adequate outpatient care.

Timeliness of diagnosis

Timely diagnosis allows the health provider to more or less accurately forecast the course and outcome of diseases or health problems, hospitalize clients in a timely manner, and prescribe adequate treatment. Module 4 collected information on the timing and place of determining the initial, clinical, and final diagnoses.⁵² Table 23 demonstrates that the outpatient RH clinics play the main role in determining the client's initial diagnosis (82% of cases assessed). In a majority of cases (56%), clinical diagnosis was done before hospitalization; however, in 40 percent of cases clinical diagnosis was done within three days after being hospitalized, and in 4 percent of cases, clinical diagnosis was done quite late—at least three days after hospitalization (Table 24). In Kamianets-Podilsky, late clinical diagnosis occurred in 8 percent of cases, which may have delayed treatment and prolonged the length of hospital stay.

Table 23. Place of Initial Diagnosis: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001–2002)

Place of initial diagnosis	Kamianets-Podilsky city		Kamianets-Podilsky Rayon		Svitlovodsk		Total	
	No. of cases	% of total	No. of cases	% of total	No. of cases	% of total	No. of cases	% of total
Women's Consultation	60	75	71	89	65	81	196	82
Doctor visiting at home	1	1.25	0	0	0	0	1	0.4
Emergency care/ (ambulance) physician	2	2.5	4	5	3	4	9	4
Self-referral	14	17.5	5	6	12	15	31	13
Other departments	3	3.75	0	0	0	0	3	1.25

⁵² An *initial diagnosis* is one that is determined by the physician as a result of counseling or preliminary examination of the client. A *clinical diagnosis* is one that is determined by the physician as a result of clinical examination using laboratory examinations and diagnostic equipment as well as observations over the course of the health problem. According to current regulations in Ukraine, a clinical diagnosis is to be determined within the first three days of a patient's hospital stay. A *final diagnosis* is an adjusted clinical diagnosis made at the end of the case (upon discharge from the hospital or death of the patient).

Table 24. Time of Clinical Diagnosis: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001–2002)

Time period	Kamianets-Podilsky city		Kamianets-Podilsky Rayon		Svitlovodsk		Total	
	No. of cases	% of total	No. of cases	% of total	No. of cases	% of total	No. of cases	% of total
Before hospitalization	49	61	44	55	41	51	134	56
Within 3 days after admission	24	30	35	44	36	45	95	40
In more than 3 days after admission	6	8	1	1	3	4	10	4
Not registered	1	1	0	0	0	0	1	0.4

The final diagnosis was made before hospitalization in 49 percent of cases, which means that the clinical diagnosis made in the outpatient clinic was confirmed in the inpatient department prior to admittance (Table 25). In 5 percent of cases, the final diagnosis was made three days after hospitalization, and in the city of Kamianets-Podilsky this occurred in 10 percent of cases.

Table 25. Time of Final Diagnosis: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)

Time period	Kamianets-Podilsky city		Kamianets-Podilsky Rayon		Svitlovodsk		Total	
	No. of cases	% of total	No. of cases	% of total	No. of cases	% of total	No. of cases	% of total
Before hospitalization	36	45	41	51	41	51	118	49
Within 3 days after admission	36	45	37	46	35	44	108	45
In more than 3 days after admission	8	10	2	2.5	3	4	13	5
Not registered	0	0	0	0	1	1.25	1	0.4

According to the researchers' assessment of client medical cards (Module 4) and MOH Orders,⁵³ histological examinations should be done in all cases of surgery or delivery. Such cases accounted for 52 percent of all cases assessed. The facility also should have conducted cytological examinations among all cases of threatened miscarriage, inflammatory diseases, menstrual disorders, and tumors, which account for a total of 34 percent of all cases included in the assessment. However, according to data collected in Module 4, in the inpatient departments, biopsy, histology, and/or cytology examinations were performed in only 11 percent of first-time patients. In the inpatient departments, ultrasounds were performed in 17 percent of cases; however, according to MOH Orders, ultrasound examinations should have been conducted for

⁵³ The number of examinations depends on the type of morbidity and is defined by the MOH Order #226, "Temporary standards for the in-patient diagnosis and treatment processes," approved July 27, 1998.

130 women (54% of cases). In the inpatient departments, cardiotocography⁵⁴ was performed in 4 percent of pregnant women; however, it should have been conducted in 62 cases (26% of all cases assessed). These discrepancies may be due to several causes. In some cases, the facility may have conducted the examination, but have not entered the result in the client's card. That may indicate that the results may not have been used in patient management, and the exam was therefore performed in vain. In other cases, the tests may not have been done because the clients were unable to pay for them. This may result in incorrect clinical assessment by physician. It is important to note that standards of care are currently being revised in the area of RH in part because many acknowledge that protocols involve an excessive number of tests and examinations.

Examination prior to hospitalization

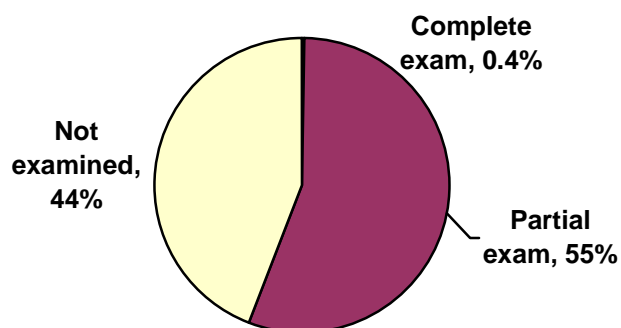
The scope of examination directly affects the diagnostic process and allows for detection of complications and associated pathology, which, in its turn, allows providers to provide timely and adequate care. The length of stay assessment determined the comprehensiveness of examination as complete examination,⁵⁵ incomplete or partly examined,⁵⁶ and not examined. Most clients (55%) were incompletely (i.e. partly only) examined before hospitalization (Figure 9). Complete examination prior to hospitalization took place in only one case, which indicates the low diagnostic capacity of rural clinics and inefficiencies and mismanagement of the diagnostic process in cities. Because in most cases outpatient clinics use practically the same diagnostic capacity as the inpatient departments, if the diagnostic capacity is sufficient on the inpatient level, it should also be sufficient on the outpatient level. Elective hospitalization without preceding complete examination in the outpatient setting may be indicative of poor patient management and poorly organized diagnostic process.

⁵⁴ Cardiotocography (CTG) is a method of recording the fetal heart rate through abdominal or trans-vaginal ultrasound probe.

⁵⁵ A complete examination is defined by the study researchers as an examination that consists of all the laboratory tests and examinations necessary to make a clinical diagnosis. The expert's assessment takes into account "Temporary standards for the in-patient diagnosis and treatment processes," which was approved by the Ukraine MOH Order No. 226, July 27, 1998).

⁵⁶ An incomplete examination is defined by the study researchers as an examination that does not include all the laboratory tests and examinations necessary to a make clinical diagnosis.

**Figure 9. Examination Prior to Hospitalization:
Cities and Rayons of Kamianets-Podilsky and
Svitlovodsk, Ukraine (2001-2)**



Patients in the remaining 44 percent of cases were examined after admission. The completeness of examination was least adequate in Svitlovodsk city and Kamianets-Podilsky Rayon. In Svitlovodsk, 65 percent of cases were examined after admission.

Laboratory examinations

Laboratory examinations performed to monitor client's condition after surgeries and deliveries were deemed up-to-standard⁵⁷ in 26 percent of cases, and below the standards in 49 percent of cases. Laboratory examinations were more comprehensive in the RH facilities in Kamianets-Podilsky Rayon, and less comprehensive in the cities. In 25 percent of all studied cases, no laboratory examination was conducted; in the city of Kamianets-Podilsky, in 48 percent of all studied cases laboratory examinations had not been done at all.

Unnecessary test duplication after deliveries and surgeries occurred in 11 percent of cases. The most frequently duplicated laboratory tests were general urinalysis, general blood test, and blood biochemistry. Variations in the structure and number of tests conducted postpartum or following surgery are due to the lack of single standards of care for all regions.

Laboratory examinations are also to be conducted prior to deliveries and surgeries in nearly all cases. Standards in Ukraine require that lab test be repeated immediately before delivery or surgery, unless the last time it was done less than two weeks ago. According to this study, 44 percent of clients were examined in accordance with standards deemed adequate by researchers, 44 percent had less than the standard set of exams, and 12 percent had no laboratory exams prior

⁵⁷ In this study, researchers made an expert judgment based on each individual diagnosis, the course of disease, presence of complications, availability of test results conducted earlier during the same episode of disease, and so forth. A basic level of standards, which included recommendations concerning the scope of examinations, scope of treatment procedures and criteria for discharge, was developed prior to Ukraine's independence (USSR MOH Order # 55 from January 1, 1986, was valid through 2003, "Temporary standards for the in-patient diagnosis and treatment processes," and was approved by the Ukraine MOH Order #226, July 27, 1998). However, these standards do not take into account the severity of the problem, complications, or timing of diagnosis or treatment.

to delivery or surgery. That 44 percent of clients received less than the standard set of examinations was not considered incompetence on the part of the facility. Rather, a basic set of laboratory examinations was conducted in these cases; however, it was not possible to collect all samples and/or results of the examinations before delivery or surgery due to the urgency of the procedure or delivery. On the other hand, the very fact that in 12 percent of cases no laboratory exams were conducted at all is an example of mismanagement of individual cases. For example, some laboratory test samples could have been taken in the reception room or immediately prior to delivery or surgery, but were not for unknown reasons. In addition, some facilities lack the capacity to conduct certain exams that MOH Orders recommend, first of all exams for TORCH infections and HIV.

In addition, there are cases in which the results of laboratory exams are not entered into the medical records (outpatient cards). For example, the number of all laboratory exams performed on clients referred by the Women's Consultations during the study period was (according to the laboratory reports) 499.5 per every 100 visits; whereas according to data collected through Module 5, it was 306 per 100 visits.⁵⁸ This means that 39 percent of laboratory examinations were not reported in the medical records (outpatient cards). The number of all laboratory exams performed during the study period for clients referred by inpatient departments was (according to the laboratory reports) 20,966; whereas data collected through Module 5 registered only 11,311 tests, or 54 percent of those conducted and recorded in the laboratory. Thus, 46 percent of laboratory exams were not registered in the medical records (inpatient cards) or other facility documentation.⁵⁹ While some of these exams may not have been registered because of the urgency of the case or by mistake, in many cases it may also demonstrate that the test results were not used by the physician and were, thus, unnecessary.

Timeliness of examination of clients by physicians and department heads

Module 4 assessed the date and time of the client's first, after admission, examination by a physician, as well as the date and time of the client's examination by the head of the inpatient department. The timeliness of diagnosis, adequate treatment, length of hospitalization, and thus efficient use of inpatient resources are directly dependent on the timeliness of these examinations.

Of the cases reviewed in Module 4, 30 percent of medical records did not include the time of the physician's examination (Table 26). Svitlovodsk, in particular, appears to suffer from organizational bottlenecks and problems in providing and recording primary examinations. In Svitlovodsk, the date and time of examination by physician was not registered in 44 percent of

⁵⁸ The data collected in Module 5 suggested that 153 lab tests are conducted per 100 visits. However, researchers have used the assumption that approximately one-half of all outpatient medical records were not located in the general outpatient registry at the time of their review of medical records. While medical records are expected to be kept in the facility's registry, they are oftentimes transferred from the registry to specialists, given to patients to share with consulting specialists, given to patients who undertake treatment outside of that facility, given to all pregnant women, or kept by the patient at home for various reasons. Based on their professional experience as facility administrators, the researchers have estimated that on average that one-half of all outpatient medical records are absent from the registry at any given time.

⁵⁹ Other facility documentation includes records of professional examinations and other examinations conducted by the facility that do not appear in patient medical records.

cases. These figures are particularly alarming considering that physicians work around-the-clock, but spend a significant amount of time idle. This does not necessarily mean, however, that the client was not examined in a timely manner; rather, the lack of specificity in the records is a characteristic of poor record keeping.

Table 26. Cases Examined by Physician, by Time after Admission (in percent): Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)

Primary examination by physician	Kamianets-Podilsky city	Kamianets-Podilsky Rayon	Svitlovodsk	Total – across all regions
Within first hour	55	56	19	43
In 2-3 hours after admission	5	11	5	7
In 4-6 hours after admission	1	4	6	4
In 6-24 hours after admission	19	4	26	16
Time not recorded in the card	20	25	44	30

An examination of clients by the department head was provided during the first 24 hours in 35 percent of all cases reviewed, within four or more days in 25 percent of cases, and in 29 percent of all cases, no examination by the department head was recorded (Table 27). It is a statutory duty of the head of department to personally examine each patient within three days of his/her admission to the department (for those emergently admitted – during first 24 hours) to maintain consistency and quality of care. Thus, 55 percent of all cases are representative of poor management in that they were either examined later than required or the time was not recorded in the chart.

Table 27. Cases Examined by Head of Department, by Time after Admission (in percent): Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)

Examination by head of department	Kamianets-Podilsky city	Kamianets-Podilsky Rayon	Svitlovodsk	In total – for all regions
Within first 24 hours	39	43	25	35
Within first 2-3 days	10	11	11	11
Within four or more days	19	7	49	25
No examination was reported	32	39	15	29

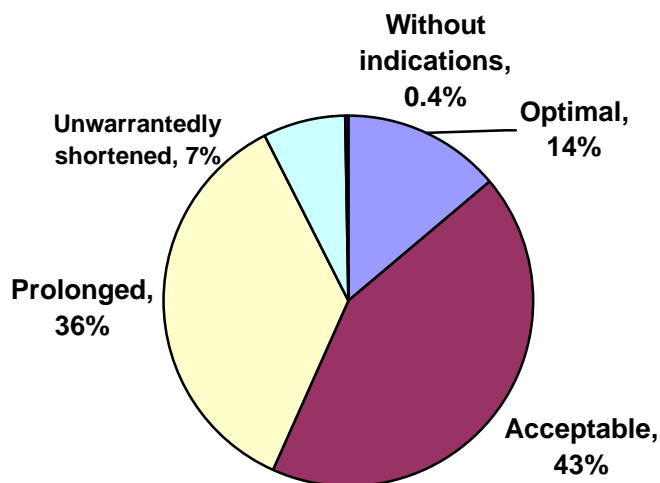
Length of hospital stay

Module 4 was used to analyze the need for hospitalization on the basis of approaches to and indications for hospitalization in Ukraine.⁶⁰ The researchers assessed the length of

⁶⁰ Approaches to and indications for hospitalization in Ukraine in many cases differ from international standards. It is important to note that as Module 4 validates, many clients are kept in the inpatient facility longer than clinically necessary. If the average length of client stay were reduced to international standards and practices, the excess bed capacity would be much bigger than these studies show.

hospitalization as optimal⁶¹ in 14 percent of cases; as acceptable⁶² in 43 percent of cases; as prolonged⁶³ in 36 percent of cases; as unwarrantedly short⁶⁴ in 7 percent of cases, and hospitalization was not indicated⁶⁵ in 0.4 percent of cases (Figure 10).

Figure 10. Expert Assessment of Length of Hospitalization: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)



The main causes of prolonged hospitalization included late treatment (13%), duplication of tests (4%), planned hospitalization of clients that did not undergo examination in ambulatory setting prior to hospitalization (14%), and an unreasonably long preoperative stage (15%). Other direct causes of prolonged hospitalization (54%) included

- Inadequate or incomplete treatment, including:
 - Prescribing antibiotics without taking into account microbial sensitivity to the drugs;

⁶¹ An *optimal* length of stay is the one that complies with standards, and one in which patients are discharged in good condition with normal lab results and without complaints. For example, a delivery with no complications discharged on the fifth day.

⁶² An *acceptable* length of stay is the one in which there is deviation from the optimal length of stay within one day; all other conditions as in the description of “optimal.”

⁶³ A *prolonged* length of stay is the one in which the client stays in the hospital for two or more days longer than standards recommend, provided the patient has no complaints, lab results are normal, there are clinical signs of complete recovery or substantial improvement, baby and mother are healthy, treatment course (including procedures) is completed, etc.

⁶⁴ An *unwarrantedly short* length of stay is the one in which the client is discharged earlier than is considered optimal or acceptable while the patient still has complaints, clinical manifestations of disease are present, lab tests results are abnormal. For example, discharge on the next day after curettage done on the seventh day after delivery with continuing blood discharge and abnormal lab test results. More often, however, the unwarrantedly short length of stay is explained by the patient voluntarily leaving the hospital without doctor’s permission, which may be a sign of absent indications for hospitalization in the first place.

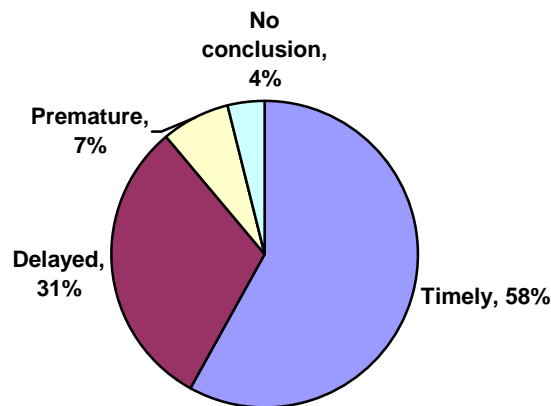
⁶⁵ A stay is deemed as *not indicated* when hospitalization was not clinically necessary.

- Mismanagement of labor and delivery resulting in complications, e.g. cervical and vaginal tears;
 - Conservative treatment of ovarian cysts without histological examination⁶⁶ (14-day delay);
- Days when a client was physically absent from the department, but registered in the hospital and included into the overall count of bed-days spent—researchers found these cases while examining notes in the medical records and comparing them with prescription and temperature forms.

Timeliness of hospital discharge

All of the factors reviewed in Module 4, such as the timing of primary examination, laboratory tests, and surgical interventions, were taken into account when identifying those cases discharged in a timely manner, late, or prematurely. According to the researchers' assessments, 58 percent of cases were discharged in a timely manner and 7 percent of cases were discharged prematurely (Figure 11). In nearly one-third (31%) of all cases discharge was delayed leading to waste of resources for 641 extra bed-days (20 percent of all bed-days) covered by the assessment. Thus, late discharge from the hospital alone accounts for a waste of one-fifth of inpatient resources.

**Figure 11. Timeliness of Hospital Discharge:
Cities and Rayons of Kamianets-Podilsky and
Svitlovodsk, Ukraine (2001-2002)**



⁶⁶ A histological examination is a study of the appearance and behavior of tissues usually carried out under a microscope.

D. Availability of equipment and its use

In Ukraine, health facility budgets include separate line items for equipment purchase and maintenance and repair. Funds allocated for equipment purchase cannot be used for equipment maintenance, and vice versa, without explicit approval from the local council. As shown earlier, line items for equipment purchase and maintenance are rarely sufficiently financed, since the lion's share budget funds is used for salaries and utilities. Thus, it is important for the facilities to purchase and use equipment in the most efficient way.

The input availability module, among other things, recorded the availability and financing of equipment. Information was collected about the facility staff, their training in using different types of equipment, the equipment mandated for each department, and the equipment available for use. In addition, Module 5 examined the reasons behind the equipment purchases that had been made by the facility in the previous year.

Lack of equipment

The three regions (Svitlovodsk, Kamianets-Podilsky city, and Kamianets-Podilsky Rayon) included in these studies generally have the basic equipment to provide RH examinations and treatment. In this assessment, the researchers prepared a list of equipment required to provide quality RH services in Ukraine and compared this list with the actual equipment available in the studied facilities. These facilities do not have the following equipment:

- Computerized tomography (CT scan)⁶⁷
- Semiautomatic and automatic analyzers for the laboratory⁶⁸
- Diagnostic laparoscopes⁶⁹
- Operative laparoscope in Svitlovodsk
- Electronic fetal monitor in Kamianets-Podilsky Rayon and Svitlovodsk city
- Digital X-ray machines and fluorographs⁷⁰
- Laboratory equipment for HIV/AIDS diagnostics

While there are no sufficient number of clients in Svitlovodsk and adjacent territories who would need sophisticated equipment such as a CT, Kamianets-Podilsky city and rayon combined do have enough clients who need access to these types of equipment. In general, a full assessment of the client base in the service area as well as the existing capacity of a facility should be taken into account before purchasing sophisticated equipment.

⁶⁷ Computerized tomography (CT scan) obtains many X-ray images from different angles, and then joins them together to show a cross-section of body tissues, organs, bones, and blood vessels.

⁶⁸ Semiautomatic and automatic analyzers are types of equipment used in the laboratory to examine human tissue specimens of secretion, e.g. blood, urine.

⁶⁹ A laparoscope is a piece of equipment allowing to directly observe – through small incision in the abdominal wall – organs of abdominal and pelvic cavity, including fallopian tubes, ovaries, uterus, small intestine, large intestine, appendix, liver, and gallbladder. The purpose of this examination is to directly assess the presence of a problem that has not been confirmed through noninvasive tests. A laparoscope may also be used during a surgical procedure.

⁷⁰ Fluorograph is a type of X-ray machine emitting low levels of radiation and allowing to quickly perform chest X-rays in large number of patients. It is used mostly for tuberculosis screening.

The lack of such modern diagnostic equipment limits the facility's diagnostic capabilities. Apart from not being able to provide some diagnostic tests, facilities often lack transport and/or supplies to send clients or lab samples taken from clients to other facilities. For example, the facility may not have funds for gas, harsh weather may harm transported lab samples, or the client may be unable to provide his/her own transportation. This reduced diagnostic capacity in turn has an effect on the quality of diagnostics available to the population, and the speed and quality of treatment that the population can receive for their RH problems. The lack of adequate equipment also hinders the introduction of more efficient and effective diagnostic technology. New health care technologies make it possible to identify RH problems at earlier stages, when treatment can be most effective and least costly.

Technical condition of equipment

Most "high-tech" equipment assessed in RH facilities through Module 5 (ultrasound machines, colposcopes, and other diagnostic equipment) was purchased 8–10 years ago. In addition, some pieces of equipment, such as an ultrasound machine in Kamianets-Podilsky MCH Center, were purchased second-hand, and thus the age of the equipment is even more advanced. Lower technology equipment and instruments (operating tables, gynecological chairs, other medical furniture, electro-cauterization machines, and equipment for sterilizing instruments) are typically 20–30 years old. In many cases, laboratory equipment is in poor technical condition and has far surpassed its recommended years of use.

Useful life of a piece of equipment depends on the type of equipment and its use frequency. In some cases, a piece of equipment that is 8–10 years old is already past the manufacturer's recommended years of use; however, if it is operational and there is insufficient funding to purchase a new piece, it remains in service. As a result of age, much of the equipment requires frequent costly maintenance. For example, researchers found that the ultrasound, endoscopes, and X-ray equipment in all facilities included in this study required frequent maintenance.

Equipment maintenance is typically not scheduled for lack of funds for *maintenance* line-item. Rather, broken equipment would stay unused at the facility and the facility would either purchase a new piece, use remaining equipment for a longer period of time than is recommended, or be unable to provide that specific service at all. The scope of laboratory examinations available in the facilities included in this study has been limited to a small number of routine tests. Thus, the facilities are unable to provide laboratory tests for TORCH-infection, and, at times, are unable to provide ultrasound and endoscopic examinations. In addition, electro-suction machines, laryngoscopes, blood pressure monitors, intravenous infusion machines, and anesthesia equipment are the types of equipment requiring frequent repairs. These repairs disrupt continuity of care in the facility, and pose a threat to quality of care that the clients receive should the piece of equipment fail during its use.

Insufficient utilization of equipment

In each of the studied facilities, ultrasound machines, colposcopes, and X-ray machines are available for use during one shift on weekdays and for emergency examinations round-the-clock.

The number of staff available in the facility to operate the equipment is regulated by an MOH Order. Each of the facilities studied adheres to the Order and keeps X-ray and ultrasound rooms fully staffed. Although one shift time is considered to be sufficient to meet all the clients needs in X-rays, ultrasounds, and colposcopies in each of the facilities studied, the use of these types of equipment is inefficient.

Analysis of the actual use of equipment to provide RH services from October–November 2001 (Module 5) verifies that equipment is being used inefficiently in each of the facilities studied (Table 28). For example, during the study period one ultrasound machine was used to do, on average, 6.2 examinations per day. If the ultrasound machine were used to its full capacity for a two-shift working day, at least 20–25 examinations could be provided in one day.⁷¹ In Kamianets-Podilsky, four X-ray machines and six ultrasound machines operate during one shift per day. Staff and equipment would be used more efficiently if two X-ray machines and three ultrasound machines were operated during two shifts per day. This would also provide more flexibility and convenience to clients. Facilities could provide better services and use resources more efficiently by using fewer, well-functioning ultrasound machines over longer shifts.

Table 28. Average Number of Ultrasound Examinations and Colposcopies per Piece of Equipment per Day: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001–2002)

Equipment	MCH Center (Kamianets-Podilsky city)	Women’s Consultation in Kamianets-Podilsky Rayon	Central Rayon Hospital in Svitlovodsk
Ultrasound machine	6.3	4.5	7.7
Colposcope	14.3	0.5	2.5

In some cases, equipment is purchased without sufficient demand to require the equipment. For example, a second X-ray machine was installed in Kamianets-Podilsky MCH Care Center eight years ago. It was purchased as an extra machine in case it was needed. However, it has not been used once because it was not needed to meet the current demand for X-rays in the city.

Finally, Kamianets-Podilsky Central Rayon Hospital currently has the capacity to provide laparoscopic surgery, but use that capacity exclusively to provide cholecystectomies⁷² in the Surgery Department. That is, the expensive sophisticated equipment is used utterly insufficiently—providing only about 85 cholecystectomies per year—while it could be used to provide other surgeries, including those conducted by the Gynecology Department. Laparoscopic surgery can significantly reduce hospital length of stay. For example, following many gynecological surgeries, clients must remain in the hospital for 8–10 days. Following a laparoscopic surgery, these clients would only remain in the hospital for 2–3 days. This would not only reduce the cost of care for these clients, but would also allow them to be more productive economically. Also, conducting laparoscopic surgeries would reduce the risks of complications due to anesthesia.

⁷¹ On average, an ultrasound machine can be used in an examination once every 20 minutes.

⁷² A cholecystectomy is a surgical procedure to remove the gallbladder.

E. Client payments for RH care

Article 49 of the Constitution of Ukraine⁷³ “proclaims that the state shall create conditions for efficient and accessible medical care for all citizens, and that medical services shall be free of charge in state and communal health care institutions” (Rudiy, 1999). Considering the deficits at which most health care facilities in Ukraine operate, health care administrations and facilities must find other means by which to fund RH care, while still respecting the legal entitlement of all citizens to free services. In many cases, when hospitalized, clients provide drugs and supplies necessary for their care, including syringes, linen, and food. Some facilities request charitable contributions from clients to help defray costs. Client funds used to purchase drugs, supplies, or contributed as charitable donations currently are officially allowed types of payments in the public health sector. However, some providers ask clients for a direct payment to provide health care or improve the quality of care that the client receives. These direct, or under-the-table, payments are illegal and are pocketed by the provider. In the shadow health care sector, health personnel rely on receiving under-the-table payments from clients or conducting private visits in a public facility in order to earn enough money to support their family. A large number of clients throughout Ukraine are able to pay something for health services, as demonstrated by the fact that they pay charitable contributions, purchase their own drugs and supplies, and provide direct payments to providers. However, these funds could be used more efficiently by reinvesting them in the formal health sector.

Module 6 *Client Exit Interview* assessed the payments that clients made for the RH care they received and how these payments affected their health-seeking behavior. While most drugs and supplies required for RH care services are available in Ukraine, some clients have limited access to these drugs and supplies because they must purchase them.

Inpatient respondents

According to exit interviews conducted with inpatient clients (Module 6), 78 percent of clients had to bring some of the necessary drugs for their care to the hospital and 96 percent had to purchase supplies (syringes, bandages, gloves, alcohol, etc.) for use in the hospital (Figure 12). Also, 64 percent of inpatient respondents reported that they made a charitable contribution to the facility. These clients reported paying an average of 110 *hryvnas* in charitable contributions to the facility during this visit.⁷⁴ Forty-three percent of inpatient respondents reported that the cost of health care at the RH inpatient facility is a burden for their family. The burden was so significant for 23 percent of clients that they have had to refuse treatment for RH problems in the past.

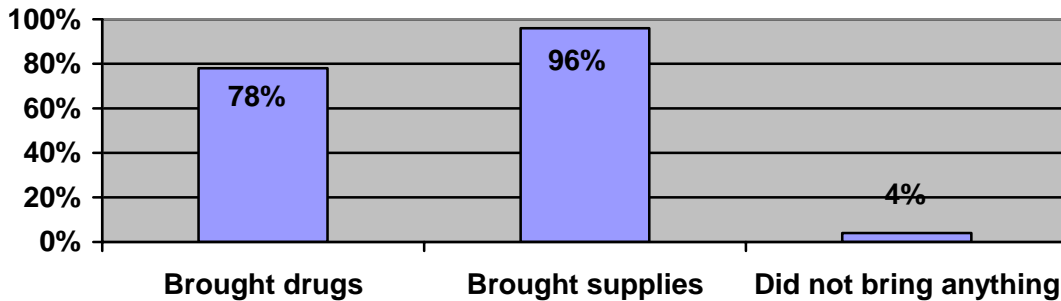
In addition to these official payments into the health sector, 39 percent of inpatients interviewed reported making a direct, under-the-table payment to health care staff. While 59 percent of clients who paid under-the-table did not wish to disclose the amount or form of the payment, 32

⁷³ The Constitution of Ukraine was enacted by the Parliament (*Verkhovna Rada*) on June 28, 1996.

⁷⁴ Approximately US\$20.

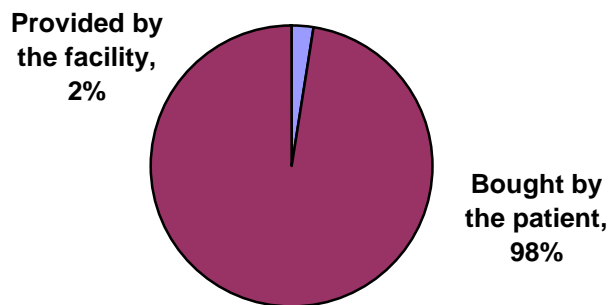
percent gave cash to the provider. When done in cash, 55 percent of payments were at 100 hryvnas or more, and 18 percent of payments were over 500 hryvnas.⁷⁵

Figure 12. Percentage of Inpatients that Brought Drugs or Supplies: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)



Forty-six percent of the inpatient clients interviewed were discharged with prescriptions for drugs, and 23 percent of inpatient clients expected to receive a prescription for drugs later on. Of these clients receiving prescriptions, only 2 percent expected that the prescribed drugs would be given to them by the facility, while 98 percent said they would have to purchase the drugs on their own (Figure 13). The majority of clients (86%) were planning to purchase the drugs, and 14 percent had no intention of buying the prescribed drugs.

Figure 13. Provision of Drugs to Inpatients after Discharge: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)



Of the inpatient clients interviewed, 39 percent reported situations in which they decided not to buy drugs because of the high price. The drugs that these clients did not purchase included vitamins (52% of the respondents), antibiotics (39%), hormonal drugs (28%), analgesics and sedatives (28%), anti-inflammatory agents (23%), contraceptives (15%), cardiovascular drugs (6%), anticonvulsants (3%), vaccines (3%), and anti-cancer drugs (3%).

⁷⁵ 100 Ukrainian hryvnas is approximately US\$20.

Outpatient respondents

According to exit interviews conducted with outpatient clients (Module 6), 6 percent had to bring along to the facility some of the drugs necessary for their care, and 64 percent had to purchase supplies (syringes, bandages, gloves, alcohol, etc.) and bring them to the facility (Figure 14). Also, 16 percent of outpatient respondents reported that they made a charitable contribution to the facility. The cost of RH services has been such a burden for 16 percent of clients that there have been occasion(s) that they have decided not to seek RH care in the past.

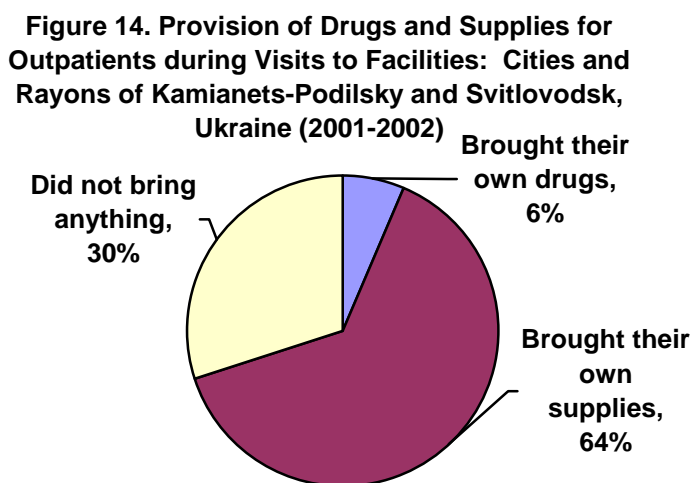
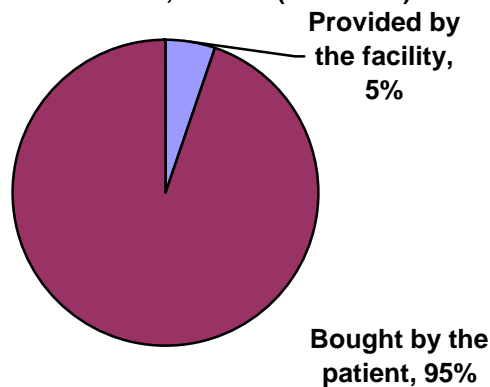


Table 29. Number of Outpatient Clients that Brought Supplies to Their Visit, by Location: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001–2002)

Location	Yes	No
Kamianets-Podilsky city	6	35
Kamianets-Podilsky Rayon	7	25
Svitlovodsk	27	10

When visiting Women’s Consultation, 42 percent of clients interviewed were prescribed drugs, and 7 percent expected to receive a prescription for drugs later on. Of these clients receiving prescriptions, only 5 percent expected that the prescribed drugs would be given to them by the facility, while 95 percent said they would have to purchase the drugs themselves (Figure 15). The majority of clients (81 percent) were planning to purchase the drugs, 2 percent had no intention of buying the prescribed drugs, and 16 percent of outpatient clients were undecided as to whether they would purchase the drugs.

Figure 15. Provision of Drugs and Supplies to Outpatients Following the Visit: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001-2002)



F. Client perception of quality of care

As discussed in previous sections, the use efficiency of already available funds can directly impact the quality of care that can be provided to clients at the health facility. One of the components of the exit interview with inpatient and outpatient clients (Module 6) was a series of questions about the client's perception of the quality of care that they received in the clinic or hospital. Clients were questioned about their satisfaction with the facility, staff, waiting time, and the level of confidentiality that they faced in the facility. The findings were analyzed separately for inpatient and outpatient respondents.

Clients' assessment of quality of care at outpatient RH care facilities

The interviews conducted with clients (Module 6) included several questions about the quality of care that they received at the facility. The questions addressed only some aspects of care quality since quality of care assessment was not the primary objective of the study.

According to the interviews with outpatient clients, most clients in outpatient facilities were satisfied with the cleanliness of the facility (83%). Also, the majority of clients were satisfied with the convenience of reception hours at the health facility (87%). While 80 percent of clients were satisfied with the confidentiality of medical services, 18 percent of respondents were unable to answer the question about confidentiality. This may indicate low client awareness about their rights, and potentially a low level of confidentiality at health facilities (Table 30).

Although, most respondents were satisfied with the cleanliness of the facility, only one-third of them (35%) were satisfied with the restrooms. Only 2 percent of clients interviewed were fully satisfied with the condition of the restrooms, and almost half of the respondents (46%) would not answer the question.

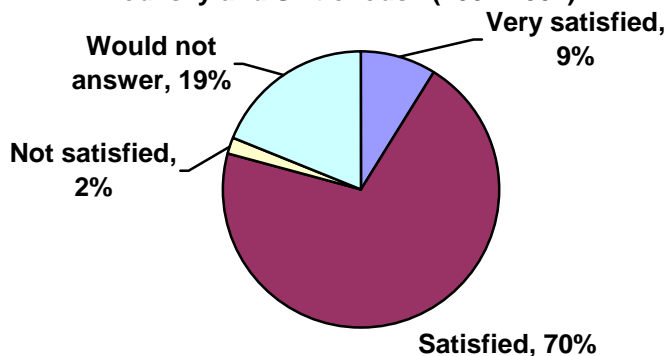
Table 30. Percentage of Outpatient Clients Satisfied with Quality of Care at the Facility, by Indicators: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001–2002)

Indicator	Completely satisfied	Satisfied	Unsatisfied	Would not answer
Cleanliness of the facility	7	76	10	7
Convenience of reception hours at health facility	9	78	9	4
Confidentiality of medical services ⁷⁶	9	71	2	18
Physicians' attitude	17	78	4	1
Nurses/midwives' attitude	8	84	3	5
Restroom condition	2	33	19	46 ⁷⁷

N = 111 respondents

Seventy-nine percent of respondents were satisfied with the medical care that they received during this outpatient visit, 2 percent were not satisfied, and 19 percent would not respond (Figure 16).

Figure 16. Clients' Satisfaction with Medical Care at Outpatient Facilities: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk (2001-2002)



Clients were also asked about the providers that they saw during the visit, their satisfaction with the amount of time that each provider spent with them, as well as the time that the client had to wait for the provider. A large majority of clients were satisfied with the amount of time that each provider spent with them, with the exception of the ultrasound specialist. Thirty percent of clients that visited an ultrasound specialist were dissatisfied with the amount of time that the provider spent with them.

⁷⁶ Respondents were questioned about their general satisfaction with confidentiality in the health facility that they visited. They were not asked about specific aspects of confidentiality.

⁷⁷ From the interviewers' perspective, clients seemed to be embarrassed to comment on the condition of restrooms in the facility.

Table 31 demonstrates the amount of time that clients spent waiting for each type of provider in the outpatient clinic. Of those clients who contacted registry workers while visiting outpatient facilities (30%), only 10 percent of clients waited 10 minutes or more. The majority of the clients that visited a nurse or midwife (63%) did not have to wait. The fact that a large percentage of clients did not have to wait for a nurse or midwife may be the evidence that the nursing staff do not have sufficient workload. Ninety-three percent of outpatient clients visited physicians on the day of the study, more than one-half of whom waited less than 10 minutes. While the short waiting time is convenient for clients and may indicate quality care, in the absence of date and time appointment system it may also be a symptom of the facility having more health personnel than necessary.

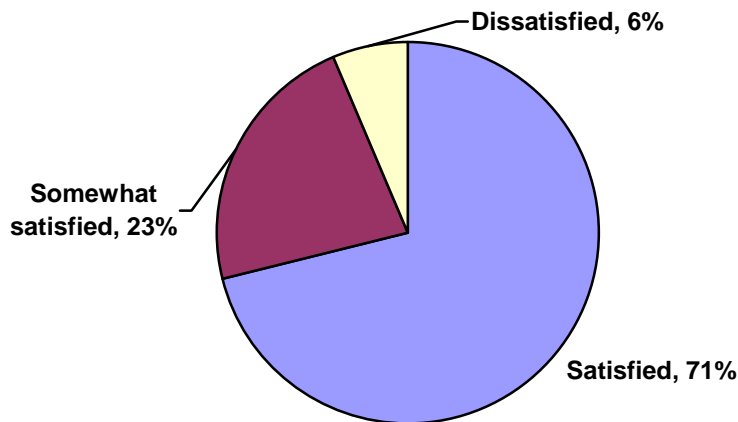
Table 31. Time Spent Waiting for Outpatient Providers, by Providers: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001–2002)

Provider	Time spent waiting						N
	Did not wait (%)	Up to 5 min (%)	5–10 min (%)	10-20 min (%)	20 min to one hour (%)	More than one hour (%)	
Registrar	35	13	42	10	0	0	31
Nurse/Midwife	63	12	20	0	5	0	40
Physician	16	7	29	25	22	1	103
Ultrasound exam specialist	11	0	33	33	12	11	9

N = Number of respondents

On the whole, 71 percent of respondents were satisfied with the amount of time they had spent waiting for health providers on the day of the survey, 23 percent were somewhat satisfied and 6 percent were dissatisfied (Figure 17).

Figure 17. Clients' Satisfaction with the Overall Amount of Time of Waiting for Health Services at Outpatient Facilities: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk (2001-2002)



Outpatient clients were also asked if they had ever exercised their right to choose the physician that would provide health care. Ukrainian legislation allows for the client to choose his/her physician. However, in practice the current system of district internists, gynecologists, and pediatricians allocates clients across physicians. While the clients have the right to decline their assigned physician, the state system provides no incentives for physicians to receive extra clients. As a result, in many cases, clients must provide the incentives to the physician at their own expense. Fifty-one percent of respondents have exercised that right for themselves or their family, and 37 percent of those respondents reported that they had to pay for their chosen physician's services unofficially.

Clients' assessment of quality of care provided at inpatient departments

According to the interviews conducted with inpatient clients (Module 6), most clients in inpatient facilities were satisfied with the cleanliness of the facility (89%). Also, the majority of clients were satisfied with the convenience of reception hours at the health facility (83%). As with outpatient respondents, while 80 percent of inpatient clients were satisfied with the confidentiality of medical services, 16 percent of respondents were unable to answer the question about confidentiality. This may indicate a lack of client awareness about their rights and potentially a low level of confidentiality at health facilities (Table 32).

Although, most respondents were satisfied with the cleanliness of the facility, more than one-half of the respondents (58%) were unsatisfied with the condition of the restrooms. Only 2 percent of clients interviewed were fully satisfied with the condition of the restrooms, and 10 percent would not answer the question.

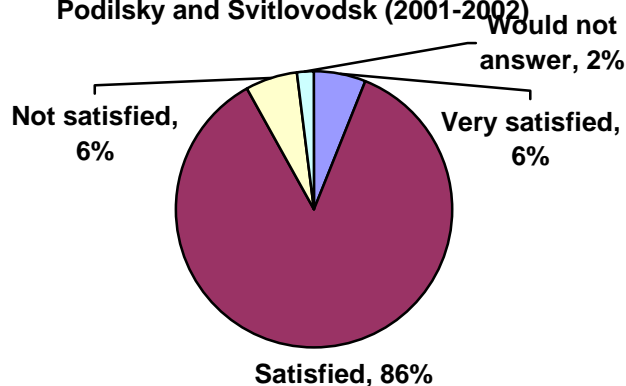
Table 32. Percentage of Inpatient Clients Satisfied with Quality of Care at the Facility, by Indicators: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001–2002)

Indicator	Completely satisfied	Satisfied	Unsatisfied	Would not answer	N
Cleanliness of the facility	11	78	10	1	176
Convenience of reception hours at health facility	2	81	7	10	176
Confidentiality of medical services	5	75	4	16	176
Physicians' attitude	8.5	83	8.5	0	176
Nurses/midwives' attitude	8	81	9	1	176
Restroom condition	2	30	58	10	176

N = Number of respondents

Ninety-two percent of respondents were satisfied with the medical care that they received during current outpatient visit, 6 percent were not satisfied, and 2 percent did not answer the question (Figure 18). Thus, the overall level of satisfaction with inpatient care is much higher than is the case for outpatient facilities (79%).

Figure 18. Clients' Satisfaction with Medical Care at Inpatient Facilities: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk (2001-2002)

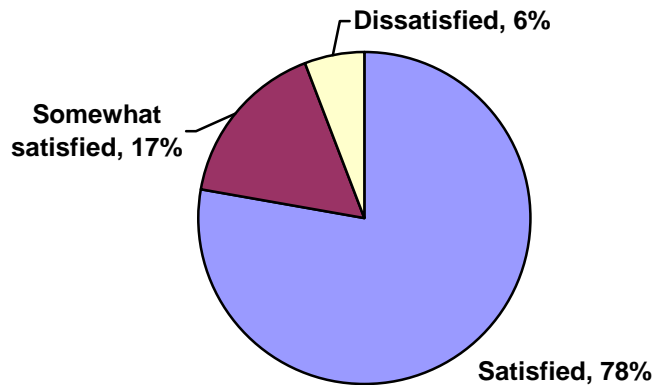


Clients were also asked about providers that they saw during the visit and their satisfaction with the amount of time that each provider spent with them.

A large majority of clients were satisfied with the amount of time that each provider spent with them. For example, of clients who were attended by the nurse or midwife in the reception room (92%), 95 percent were satisfied with the amount of time this provider spent with them. Of clients who were attended by the physician in the department (96%), 91 percent were satisfied with the amount of time this provider spent with them. The head of the department examined 71 percent of clients, the majority of whom (96%) were satisfied with the amount of time spent on them. According to the established rules, the head of the department is to examine all clients of his/her department. The fact that only 71 percent of clients were examined by the head of the

department may have an impact on the quality of treatment and care that a client receives. In general, more than three-quarters of respondents (78%) were satisfied with the overall amount of time they spent waiting for health providers, 17 percent were more or less satisfied, and 6 percent were dissatisfied (Figure 19).

Figure 19. Clients' Satisfaction with the Amount of Time of Waiting for Medical Care at Inpatient Departments: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk (2001-2002)



Inpatient clients were also asked if they had ever exercised their right to choose the physician that would provide health care.⁷⁸ Seventy-two percent of inpatient respondents have exercised that right for themselves or their family and 35 percent of those respondents reported that they had to pay for their chosen physician's services unofficially (under-the-table).

Clients' preferences for changes needed in the health care system

Clients were asked about potential changes in their local health care system. Three quarters (75%) of outpatient respondents wished that the local health care system be improved. The overwhelming majority of inpatient respondents (89%) also wished to see improvements in the city health care system.

As demonstrated in Table 33, nearly one-half of outpatient respondents that wished to see changes in the health system (47%) would like to see the system of payment for drugs changed. Forty-two percent of outpatient respondents think it is necessary to purchase new equipment for health care facilities. Despite the fact that the overwhelming majority of outpatient respondents reported satisfaction with their physician's attitude (95%) and their nurse/midwife's attitude (92%), 30 percent would like to see improvements in the providers' attitude toward clients.

⁷⁸ Ukrainian legislation allows client to choose his/her physician. In practice, however, the current system of district physicians, gynecologists, and pediatricians allocates clients across physicians. While clients do have the right to refuse services of their assigned physician, the state system provides no incentives for physicians to receive extra clients. As a result, in many cases, clients must provide the incentives to the physician at their own expense.

More inpatient respondents than outpatient respondents wished to see changes among nearly all of the items covered in this survey (Table 33). For example, 82 percent of inpatient respondents that wished to see changes in the health system would like to see the system of payment for drugs changed. Except for the wish in more convenient location of the health facility, which was expressed by 13 percent of inpatient respondents versus 25 percent of outpatient respondents, a much higher percentage of inpatient respondents wished to see changes in the health care system.

Table 33. What Would Clients Like to Change About the Health Care System: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001–2002)

Changes to the health system	Inpatient respondents (%)	Outpatient respondents (%)
Payments for drugs	82	47
Payments for services	78	41
Payments for supplies	77	29
New equipment	76	42
Improved provider skills	79	36
Improved provider attitude	77	30
Improved quality of care	26	22
Choice of providers	65	19
Choice of health facilities	52	12
More convenient reception hours	25	6
More convenient location of health facility	13	25

Outpatient and inpatient clients were questioned about the health care reform currently underway in their locality. Among outpatient respondents, only 18 percent were aware of such reforms, and 62 percent of inpatient respondents were aware of ongoing reforms. More than one-half of inpatient respondents (51%) and 20 percent of outpatient respondents did not have a particular attitude to health care reforms. Nearly one-third (31%) of outpatient respondents approved of the ongoing reforms, whereas only 6 percent of inpatient respondents showed their support of these efforts (Table 34).

Table 34. Respondents' Attitude to Local Health Care Reforms: Cities and Rayons of Kamianets-Podilsky and Svitlovodsk, Ukraine (2001–2002)

Respondents' Attitude	Inpatient respondents	Outpatient respondents
Approve and support	6%	31%
Efforts should be sped up	11%	28%
Indifferent	5%	13%
Nothing positive will result	19%	8%
Reforms should not be implemented	8%	0%
Have no specific attitude	51%	20%
Number of respondents	119	39

IV. Overall Recommendations

The following recommendations were developed by the researchers using the findings from this study. This section provides recommendations that are directly related to this study, but do not result from the findings. Although this study was conducted in 15 departments located in two regions of Ukraine, in the researchers' opinion, circumstances in health facilities throughout Ukraine are similar to the conditions in these departments. Thus, the researchers feel that many of the recommendations could be generalized and adopted in health facilities throughout Ukraine. In addition, these studies were designed to identify inefficiencies in the RH system and provide recommendations that could allow the health system to use resources more efficiently. In order to implement these recommendations, further in-depth studies and/or pilot programs would be necessary to tailor them to community needs.

Decentralize financial decision making to the local and facility levels

1. Rather than developing a facility budget based on inflated staff and bed numbers, outpatient facility budgets could be developed based on the volume of care that the outpatient facility provides; and inpatient facility budgets could be developed as a global budget⁷⁹ taking into account the actual amount of services provided by the facility and the cost of those services. These facility budgets could then also be disaggregated to the level of departments where they can be more easily monitored and where the funds are actually spent. A global budget would eliminate the rigidity of the current line-item financing and would increase health facility managers' flexibility while increasing their accountability.
2. Up-to-date and accurate information is required for facilities to prepare a budget that will take into account the actual volume and type of services provided. Health administrations would need average costs for providing different types of services and systems for collecting accurate data on a regular basis about client flows into outpatient and inpatient services. In some health administrations, accurate statistical systems may already exist, but improved reporting from facilities may be needed. This may require making the health statistics department independent from health facilities, since under the current system health statistics department may be under the pressure of the facility head to provide inaccurate data.
3. To improve the ability of the head of the facility to manage it and be held accountable for the quality of care that the facility provides, health facility managers/administrators could be responsible for developing and implementing the facility's budget based on the individual

⁷⁹ "In contrast to a line-item budget, a global budget is a payment fixed in advance to cover aggregate expenditures in a given period. The major features of a global budget are: (i) it is not linked to line-item expenditures, leaving budget managers free to reallocate expenditures across line items as needed for efficient management; and (ii) once fixed, the budget is difficult to amend over the budget period (that is, supplemental budget amounts are not easily forthcoming from the central financial authorities). Health finance reforms using global budgets are intended simultaneously to increase managers' flexibility while holding them accountable for efficient performance. At the institutional level (for instance, hospitals), global budgets signify that the institution has considerable discretion over the use of the funds in the fixed budget. Global budgets can be an important element of health sector reforms that include decentralization of the health system" (Barnum et al., 1995).

facility's needs and volume of services (as described above). In addition to government funds that flow into the facility, health facility managers could also be responsible for managing funds received from other sources, such as paid services and philanthropic donations. Community advisory boards may be set up to supervise funds allocation and use.

4. Prepare an FSP for all pieces of equipment before they are purchased to ensure that the facility can afford the piece of equipment, maintenance costs, and cost of necessary supplies to operate the equipment. Also, this plan could help the administration assess the actual need of the piece of equipment and the cost of purchasing a new piece versus repairing the older piece of equipment. This plan can be used to ensure that the cost of maintaining and operating the equipment is included in the facility's budget each year and to specify the source of funds. An FSP would also include a forecast of the equipment's depreciation to ensure that equipment that can no longer be used efficiently and effectively is replaced with newer equipment and is either donated to facilities in need or discarded.

Reduce staff, beds, and facilities to a level that will adequately meet local needs

1. MOH Orders #33 and #74, which link the bed capacity of a health facility to the population and to the number of staff in each facility, should be eliminated since they do not allow facilities to manage the number of staff and beds according to their needs and result in waste of scarce resources.
2. Eliminating MOH Orders #33 and #74 will allow facilities to reduce bed and staff capacity to a level that will adequately meet local needs, and, thus, reduce staff and communal costs (utilities). Excess bed capacity could be reduced by merging related departments and by providing day care for cases that could be managed ambulatory.
3. In some places, health administrations may find it efficient to merge either separate facilities or some of overlapping functions performed by separate facilities. For example, in Kamianets-Podilsky, the city's MCH Care Center and the Central Rayon Hospital provide the same RH services and are located literally across the street from one another. Rather than continuing to provide RH services, the Central Rayon Hospital could send its RH clients, along with the funds allocated to provide care for those clients, to the MCH Center. This would avoid a duplication of expenditures on equipment, staff, and infrastructure.

Develop and implement the system of contracts between local governments, health facilities and staff

1. A system of contracts for hiring medical staff and commissioning defined volume of services may be introduced on the local level. Localities would have contracts with facilities, which would in turn have contracts with staff and other companies that provide products and services to the facility. To ensure that facilities are meeting the needs of the population in the best way possible, the contract system could include performance-based incentives for staff and facilities to provide a certain volume and quality of care. Health care quality and volume indicators should be revised annually.

2. Instead of using the calculations listed in the MOH Order, staff numbers for each inpatient department could be calculated based on the patient flows and the staff skills needed to provide health services. In line with reducing the overall staff number, it would also allow the facility to reduce the number of health providers working on night shifts, weekends, and holidays taking into account the actual volume of care and needs of the departments. The facility would monitor the census monthly and adjust staffing needs across departments accordingly. For example, in the case of the maternity department, the facility could monitor the patient flow monthly and receive information from the Women's Consultation about the number of women expected to deliver each month. As described above, health facility managers will require up-to-date, accurate information to make decisions about their staffing needs.
3. Because outpatient providers spent more than one-half their time and inpatient providers spend one-third their time on administrative tasks, facilities could use their staff more efficiently by reducing the amount of time that health personnel spend on administrative tasks. This can be implemented as a part of the contract system by
 - a. Changing the method used to do medical records. Additional analysis should be conducted in order to determine the most efficient way for staff to perform administrative functions. For example, providing physicians with fill-in forms for recording visit details and computerizing all medical records.
 - b. Reducing the number of journals/registers. An example of journals that could be abolished is the one for registering switch-on and switch-off time for ultra-violet bactericidal ward lamps.
 - c. Hiring clerical aids to perform non-medical duties rather than burdening nurses and midwives with clerical functions. In cases in which staff will be reduced, some midwives and nurses may wish to be reassigned as clerical aids.
 - d. Finally, revising the job descriptions of midwives and nurses at Women's Consultations and in inpatient departments to ensure that most of their working time is spent in patient care.
4. Within the contract system described above between the local government and health care facilities, the latter should be encouraged to merge departments if number of cases and overall need in in-patient care decreases. For example, in some facilities, the Pathology of Pregnancy and Gynecology departments could be open Monday through Friday and closed on weekends. Clients from these departments that require care on the weekends could be taken care for in the Maternity departments or by the staff of Maternity departments. This would provide savings on staff and communal costs (utilities).
5. Officially sanction outpatient visits with leading specialists from inpatient departments, allowing them to use outpatient clinic resources. At the moment, staff and functions of outpatient and inpatient departments are officially separated. If facilities were reorganized such that staff were allowed to practice both in an inpatient and outpatient setting, there could be fewer staff, clients would be able to access their preferred physicians, and resources would be used more efficiently. In addition, the quality and timing of diagnosis, treatment, and hospitalization would likely improve as physicians would be responsible for both outpatient

and inpatient care. For example, physicians could practice in the outpatient clinic on certain days and conduct procedures on their hospitalized clients on other days. Since many of these facilities are within close proximity to one another, these physicians could continue to monitor their inpatient clients on days that they practiced primarily in the outpatient clinic.

6. In cases where city, rayon, and/or privately owned facilities are located in close proximity to one another, the facilities could consolidate funds to purchase equipment and meet the overall demand for services without having excess capacity. For example, where city and rayon facilities are in close proximity to one another, one facility could provide all ultrasound examinations and the other could provide all laparoscopic surgeries. When developing a collaboration plan between facilities, clinical capacities, convenience for clients, and transportation availability and cost for clients should be taken into account. In addition, local governments could encourage collaboration between health care facilities through not reducing the facility budgets drastically but allowing them to use cost-savings to meet other needs of their budgets.
7. Organize ultrasound rooms to provide services during two shifts to ensure wider access to examinations. Considering the service statistics in Kamianets-Podilsky, four ultrasound machines, including the staff to operate them, is excessive capacity and an inefficient use of resources. The equipment and staff could be used more efficiently by organizing the work of ultrasound room in such a way that two machines rather than four would be available but during two shifts. The facility in Kamianets-Podilsky could consider selling extra pieces of equipment to another health facility. When, on the other hand, in order to meet the existing healthcare needs of the community a facility needs to purchase a new piece of equipment, an assessment should be conducted and financial sustainability plan developed (as described above) to avoid purchasing more ultrasound machines than is actually required.
8. Throughout reforming the health care system, localities and facilities are advised to hold seminars for facility staff to keep them informed of reforms and the effect that reforms will have on the way that the facility operates. Staff may also require training to implement new policies and practices.

Develop alternative payment and targeting mechanisms

As the bed and staff capacity in facilities is reduced, more funds will be available for essential drugs and supplies. This will help to reduce the burden on the client, but the following recommendations could also improve access to drugs and supplies:

1. Currently, staff provide free drugs and supplies to those clients that meet certain national criteria and to others based on their personal perception of the client's need, to the extent that the facility budget permits. To ensure that those clients most in need of assistance are able to receive it, cities and rayons could develop an official system for targeting free drugs and supplies to clients other than those deemed in need by national law.
2. Facilities could be allowed to charge user fees on a scale commensurate with the type of service provided. Payments that in the past have become part of the shadow health care

economy would then be invested into the facility and the care that it provides, such as providing drugs and supplies to more clients at a reduced rate. User fees can take a variety of forms, such as voluntary donations or a specific fee for each type of service. Localities could take into account the cost of care, market rates, as well as clients' willingness and ability to pay for services to identify a user fee structure that would improve the quality and accessibility of services that the facility can provide.

Improve referral system and coordination between facilities and departments

1. Expand the use of day care units at both outpatient and inpatient facilities to make sure the clients who do not need to stay in the hospital are being followed up on outpatient basis.
2. Improve outpatient care by providing comprehensive examinations before hospitalization and more widely using diagnostic procedures such as tests for TORCH infection,⁸⁰ ultrasounds, and electronic fetal monitoring/fetal cardiotocography according to indications. This would reduce the length of stay and number of cases hospitalized.
3. Exclude unnecessary laboratory examinations and record all lab results into client medical records. According to the findings of this study, approximately one-half of the results of laboratory exams are not registered in the client's medical records. In some cases, this may be due to the burdensome obligation for the health provider to enter all laboratory results into the medical records. Instead of medical providers entering this information into clients' medical records, the laboratory could be charged with the responsibility to perform this task for all the lab results produced in it. In other cases, it may be due to the fact that some laboratory exams are conducted unnecessarily or are duplicated because previous lab results were not recorded. Number of needless laboratory exams may be reduced by amending national protocols, and test duplication could be reduced through setting up a uniform system of registering medical data in laboratories, outpatient and inpatient departments, which in the future may become a constituent part of a uniform electronic database.
4. Introduce laparoscopic techniques in RH departments. In some facilities, such as the Central Rayon Hospital in Kamianets-Podilsky, laparoscopic equipment is available but underutilized, and not used for RH care at all. The equipment could be used more efficiently by training staff to provide laparoscopic surgery for gynecological problems, and sharing the equipment between departments.

Improve the quality of care in facilities, particularly in areas of importance for the clients

1. In this survey, few clients expressed their complete satisfaction with confidentiality granted them in the health facility. While the data collected did not suggest strong problems in the area of confidentiality, these figures may indicate low client and provider awareness about patient's rights, and could indicate a low level of confidentiality at the health facilities. The MOH could consider ways to address confidentiality in the guidelines and protocols that they

⁸⁰ TORCH is an acronym consisting of the first letters of the following words: **T**oxoplasmosis, **O**ther Agents, **R**ubella (also known as German Measles), **C**ytomegalovirus, and **H**erpes Simplex.

issue to health facilities, issue posters of patient's rights to be posted in all facilities, and provide training to health care providers on confidentiality and patient's rights.

- a. As described above, Ukrainian law allows for the client to choose his/her physician. However, in practice, many clients must provide under-the-table payments to their physician of choice. Allowing clients to choose their providers without having to make under-the-table payments, rather than providing assignments, would improve the client's view of the health system and encourage providers to improve the quality of care they provide to ensure that the facility has a large number of clients.
2. Clients expressed their concern about the cleanliness of restrooms in the facilities studied. While this is not an area where medical services are provided, infection may spread through restrooms with low sanitary standards, which is why facilities should pay more attention to their restroom conditions.

Recommendations that do not follow directly from the findings

1. Each facility could hire an administrator that works with and reports to the chief physician, but is directly responsible for managing the facility's budget, contracts with staff and suppliers, and other administrative duties. In the current health care system in Ukraine, chief physicians have not received basic training in health care management and administration, and many do not have the skills or the time required to properly develop and manage the facility's budget.
2. An essential package of state-guaranteed health care services is currently awaiting approval by the Verhovna Rada. Once approved, localities must provide the essential minimum package of services, and only after that they can provide other services that can be covered by the facility budgets. This package is supposed to define which services can be provided for free and which must be paid for, in whole or in part, by the client. Considering the upcoming election year, there is political pressure to pass such a package, which will potentially have ramifications for other recommendations that have come out of this study. However, the researchers see this package as an important step in the government admitting that it is unable to provide all health care services without charge to the client.
3. While quite a lot of clients are able to pay for the drugs they need for treatment, they may only be able to afford less expensive drugs that may be significantly less effective. To help alleviate this problem, the MOH could develop an Essential Drug List⁸¹ based on the WHO

⁸¹ An essential drug list or formulary lists the names of the drugs considered optimal treatment choices to satisfy the health care needs of the majority of a population. These needs differ between the levels of health care provision and between regions of the country so the national essential drug list must take into account diverse needs. National essential drug list contains generic names of the drugs and the dosage form and may also include pack size and other specifications. Essential drug lists should be periodically reviewed and revised as appropriate to account for changing product offerings and modifications in standard treatment guidelines. The WHO model essential drug list is updated every two to four years. (Taken from the World Bank's Technical Note on Procurement of Health Sector Goods, February 2001.)

Model Formulary. This drug list would guide physicians in prescribing generic drugs with the best effectiveness-to-price ratio.

4. As described, confidentiality may be a concern in the health facilities included in this study. While this study did not ask detailed questions about violations of confidentiality or probe respondents as to why they were not completely satisfied with the level of confidentiality offered in the facility, there have been other studies in Ukraine addressing this issue. For example, the Maternal and Infant Health Project conducted an assessment in Ukraine during the design phase of their project work plan, which found that facilities frequently violate patient confidentiality and privacy during antenatal care and delivery. In addition, POLICY is conducting a study that assesses human rights issues, such as confidentiality among HIV-positive women. Preliminary results show that HIV-positive women face violation of confidentiality when providers disclose their HIV status to other health providers, clients, and family members, lack discretion when informing the client of her own HIV status, and in keeping medical records. Considering the results of these studies, the MOH could consider ways to address confidentiality in the guidelines and protocols that they issue to health facilities and also train medical providers in issues of confidentiality and privacy.

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Glossary of Terms

Acceptable length of stay is one in which there is deviation from the optimal length of stay within one day; all other conditions as in the description of “optimal.”

Administrative time consists of time spent on meetings and conferences, completing client medical records, registers, other documentation, and other administrative tasks.

Ambulance physician is one that serves on the ambulance team. A “feldsher” (nurse) and a driver constitute the remainder of the ambulance team. These teams are assigned to 24-hour urgent care medical stations. Expenditures on ambulance services constitute a substantial share of health care budget spending (for example, 10 percent of health care funds in Kamianets-Podilsky are spent on ambulance services).

Bed-days – a measurement unit indicating that an inpatient bed was occupied during one full day. In Ukraine, the indicator impacts the amount of funds allocated for such budget line-items as staff, utilities, sanitary surveillance, supplies, meals for patients, laundry services, etc.

Cardiotocograph (CTG) is a record of the fetal heart rate either measured from a transducer on the abdomen or a probe on the fetal scalp.

Charitable contributions are ‘voluntary’ donations that clients make to facilities before they receive health services. In most facilities, patients are informed – either personally or through written posters – about the standard charitable contribution for each type of service. These contributions are made to the facility’s cash desk.

Cholecystectomy is a surgical operation to remove the gall bladder.

Clinical diagnosis is one that is determined by the physician as a result of clinical examination using laboratory examinations and diagnostic equipment as well as observations over the course of the health problem. According to current regulations in Ukraine, a clinical diagnosis is to be determined within the first three days of a patient’s hospital stay.

Complete examination is defined by the study researchers as an examination that consists of all the laboratory tests and examinations necessary to make a clinical diagnosis.

Computerized tomography (CT scan) allows to obtain numerous X-ray images from different angles, and then joins them together to show a cross-section of body tissues, organs, bones and blood vessels.

Consultation (in the context of this document) is the same as a *visit* (to the physician).

Counseling (in the context of this document) is a process of explanation provided by a doctor to a patient concerning the goals of the examination, treatment or procedure, existing risks to the patient’s health, prognosis for progression of the disease, etc.

Examination may consist of taking the patient's medical history, his/her physical examination, and/or instrumental and laboratory tests.

Family Planning Specialists are physicians who work in the Family Planning Center of the Women's Consultations.

Final diagnosis is an adjusted clinical diagnosis made at the end of the case (upon discharge from the hospital or death of the patient).

Fluorograph is a type of X-ray machine emitting low levels of radiation and allowing to quickly perform chest X-rays in large number of patients. It is used mostly for tuberculosis screening.

Global budget is a "payment fixed in advance to cover aggregate expenditures in a given period. The major features of a global budget are (1) it is not linked to line-item expenditures, leaving budget managers free to reallocate expenditures across line items as needed for efficient management; and (2) once fixed, the budget is difficult to amend over the budget period (that is, supplemental budget amounts are not easily forthcoming from the central financial authorities). Health finance reforms using global budgets are intended simultaneously to increase managers' flexibility while holding them accountable for efficient performance. At the institutional level (for instance, hospitals), global budgets signify that the institution has considerable discretion over the use of the funds in the fixed budget. Global budgets can be an important element of health sector reforms that include decentralization of the health system" (Barnum et al., 1995).

Histological examination is a study of the human tissue samples usually carried out under a microscope.

Hospitalization is admitting a patient to the hospital for diagnostics and treatment, or *admission to the inpatient setting*. It can be (1) *planned*, when the patient's condition does not require urgent intervention, and the patient is supposed to be fully diagnosed in an outpatient setting; or (2) *urgent (emergency)* on a round-the-clock basis, when the patient's medical problem requires urgent intervention. Urgent hospitalization is provided mostly by ambulance teams.

Idle time was divided among a number of categories, including: bathroom break, food break, chatting, sitting (doing nothing), sleeping, smoking, talking on the phone for personal reasons, and waiting for test results.

Incomplete examination is defined by the study researchers as an examination that does not include all the laboratory tests and examinations necessary to a make clinical diagnosis.

Initial diagnosis is one that is determined by the physician as a result of counseling or preliminary examination of the client.

Laparoscopes are a piece of equipment that allows a health care provider to look directly at the contents of a patient's abdomen or pelvis, including the fallopian tubes, ovaries, uterus, small bowel, large bowel, appendix, liver, and gallbladder. The purpose of this examination is to

directly observe the viscera, which is impossible to do through noninvasive tests. Laparoscopes are also used for surgical procedures.

Medical procedure is a health care intervention that does not involve visible tissue damage such as an incision.

Operational policies are the rules, regulations, guidelines, operating procedures, and administrative norms that governments use to translate national laws and policies into programs and services. These policies may pose barriers to service delivery due to a lack of policy guidance, misguided design of the policy, or misguided implementation of an appropriate policy.

Optimal length of stay is the one that complies with standards, and the one in which patients are discharged in good condition with normal lab results and without complaints. For example, a delivery with no complications discharged on the fifth day.

Prolonged length of stay is one in which the client stays in the hospital longer by two or more days than standards recommend in the case that there are no complaints present, normal lab results, clinical signs of complete recovery or substantial improvement, healthy baby and mother, after the full course of treatment, with no prescribed procedures, etc.

Semiautomatic and automatic analyzers are pieces of equipment used in the laboratory to examine biologic specimens such as human tissues and secretion, e.g. blood and urine.

Shadow payments refer to those payments given directly to a provider rather than to the facility cashier and that are pocketed by the provider rather than used for the client's care. These payments are illegal in Ukraine, yet many service providers use these shadow payments to supplement their low income.

Social insurance contributions are contributions to the national pension fund, unemployment fund, and workman's compensation fund that are taken from each employees' paycheck.

Surgeries are curative or diagnostic procedures that involve incision or puncture of tissue and/or organs.

TORCH is an acronym meaning (T)oxoplasmosis, (O)ther Agents, (R)ubella (also known as German Measles), (C)ytomegalovirus, and (H)erpes Simplex.

Unwarrantedly short length of stay is one in which the client is discharged earlier than optimal or acceptable while lab tests results are abnormal, with patient complaints, and clinically manifesting disease. For example, discharge on the seventh day after delivery and the day after suction of the uterine cavity with continuing blood discharge and abnormal test results.

Uterine fibroids are benign tumors of muscle and connective tissue that develop within or are attached to the uterine wall.

A hospital stay “Without indications” is one in which there is no clinical sign of disease, or discharge after one day of hospital stay following delivery because the patient left the department voluntarily against doctor’s recommendations.