PROJECT "ZDRAVREFORM"
PATIENTS' SATISFACTION STUDIES
TOPIC 123.2.2

REPORT

DEVELOPMENT OF THE QUESTIONNAIRE REGARDING THE DEGREE OF PATIENTS' SATISFACTION IN KEMEROVO
(interim report)

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Kemerovo, 1996

Summary

Investigation of patients' satisfaction with the quality of care is presented in this report. Patients' satisfaction evaluation with the quality of care was carried out along the following lines:

- accessibility of outpatient and inpatient care (organizational aspects);
- competence and professionalism of physicians and other medical personnel;
- state of logistics;
- status of sanitary-anti-epidemic regime;
- organization of meals;
- provision of medications;
- adherence to ethical and professional standards by medical personnel.

This procedure is intended for consideration of patients' opinion by means of sociological screenings followed by collected data objectification based on experts' evaluation.

Final stage of this procedure consists in the integral assessment of the quality of care along with the use of screening investigation materials and objective expertise accompanied by the application of the evaluation results in the number of points and rating of medical facilities.

PATIENTS' SATISFACTION EVALUATION TECHNIQUE WITH THE QUALITY OF CARE

Studies on patients' satisfaction with the quality of care delivered are carried out on the basis of sociological research, for example screening, as well as objective methods of evaluation of the quality of care.

Assessment of patients' satisfaction is supposed to be carried out according to the following positions:

- accessibility of outpatient and inpatient care (organizational aspects);
- competence and professionalism of physicians and nurses;
- state of logistics;
- status of sanitary-antiepidemic regime;
- organization of meals;
- provision with medications;
- adherence to ethical and professional standards by the medical staff.

In order to carry out screening investigations one can develop a common questionnaire jointly with the Department of Health Protection, Territorial Fund of Mandatory Health Insurance, Kuzbass Association of Insurance Organizations, Association of Kuzbass Physicians (see Annex 1). Sociological research can be carried out using data collection only one time or on an ongoing basis, using whole-population or sampling data collection, depending on the capacity of the medical facility and the objectives of the research. More often investigation is carried out using various types of sampling for data collection.

As it's difficult to identify the frequency of positive and negative answers while designing the research (the situation can often be unpredictable) and due to this fact it's hard to define the volume of the material to be extracted it is suggested to identify the necessary number of observations on the basis of the proportion 0,5:0,5. That is consider the chances "for" and "against" to be equal (A.M.Merkov, 1960, A.M.Merkov, L.E.Polyakov, 1974, G.F.Lakin, 1980 etc.). According to this approach 400 observations (with probability of error < 0,05) can be considered sufficient volume for selective research.

In case when conducting experimental investigation in 100-150-200 observations the indicators of frequency calculated for 100 of the interviewed are valid, then the volume of selection can be reduced to the volumes of experimental sociological examinations.

Thus, for example, out of 102 interviewed patients 75 mentioned the impossibility to choose the physician.

In order to identify the frequency of negative answers it is necessary to calculate the intensive indicator (indicator of frequency):

$$\frac{102 - 75}{100 - x} \qquad x = 73{,}5$$

The evaluation of indicator validity is made according to the formula:

$$t = \frac{P}{m}$$

, where t - measure of validity;
P - indicator (chances "for");
m - error of the indicator;
q - chances "against" (100-73,5=26,5);

n - number of observations

$$m = \pm \sqrt{\frac{pq}{n}}$$

$$m = \pm \sqrt{\frac{73,5 \times 26,5}{102}} = 4,4$$

$$t = \frac{73,5}{4,4} = 16,7; \quad t > 2.$$

The indicator is statistically valid if it approximately two times increases its error, i.e. measure t must be more then 2.

Conclusion: indicator is statistically valid.

Materials of sociological research can be used as screening tests with the follow-up more detailed expertise of the situation aimed at its objectification.

Five points scale in each of the above mentioned positions is used for integral evaluation of patients' satisfaction with the quality of care (see questionnaire), as well as the formula given below.

$$PSE = \frac{AC + CCP + L + SAER + OM + MP + AED}{S}$$

PSE - evaluation of patients' satisfaction with the quality of care provided;

AC - accessibility of care;

CCP - complete set, competence, professionalism of medical staff;

L - logistics;

SAER - sanitary anti-epidemic regime;

OM - organization of meals;

MP - provision with medications;

AED - adherence to ethical and deontological standards;

S - summary of the positions under consideration.

The technique described should be considered as the initial stage of patients' satisfaction evaluation with the quality of care.

If more than 50% of the interviewed patients expressed negative opinion in respect of one or another position in this case further more detailed investigation is carried out. Negative evaluation is considered to be 1-2 points.

It is suggested to make use of the appropriate objective techniques to assess in more detail the situation concerning the above mentioned positions. In this case the evaluation of the situation is made with the experts' assistance.

More detailed technique of patients' satisfaction evaluation with the quality of care provided

More detailed evaluation of patients' satisfaction with the quality of care is made with the help of the following scale:

Scale of expert evaluations

Rate of patients who received care in compliance with the rules and conditions of TMS (in %)	Number of points
85 - 100	5
70 - 84	4
55 - 69	3
40 - 54	2
less than 40	1

The given scale is proposed for all the positions under consideration with respect to the detailed evaluation of patients' satisfaction with the quality of care.

Evaluation techniques of outpatient and inpatient care accessibility

More detailed evaluation of outpatient and inpatient care accessibility is based on the review of the possibility to:

- choose the physician in order to be covered by services of the outpatient medical facility;
- receive primary health care services;
- receive experts' services;
- go through laboratory tests;
- receive medical-preventive procedures;
- be covered with planned hospital admission.

Assessment of the possibility to receive the above mentioned services is made with respect to the terms envisaged by the rules of the mandatory medical insurance. For this purpose the real possibility of getting the listed services when a patient applies to the appropriate structural subdivisions (ambulances, polyclinics, practices, laboratories, procedure rooms or inpatient departments for planned hospital admission) is determined by the method of selective interrogation of ten-fifteen patients or confirmation in the documents (the journals to register the appointments to see a specialist, referrals to specialists etc.). Evaluation of the possibility is determined in percentage with the follow-up expression in points (see the scale above) and

determination of the average points' rate as to the above mentioned positions (physician's choice, primary health care, laboratory tests, medical-preventive procedures, planned hospital admission). Evaluation in points is used to refine the materials of screening survey.

Consider the following example.
So, among 15 patients who were interviewed, three pointed to the impossibility of choosing the physician in a polyclinic when they applied there for the first time. Four patients waited for their appointment to see a specialist for about 2.5-3 weeks (instead of two envisaged by the Territorial Program of Medical Insurance). Three patients complained of the increase in the period of waiting to get diagnostic examination indicated in the document-referral to receive this kind of services. Two patients were admitted to the hospital but the waiting time for admission was longer than expected.

Analysis of accessibility to receive medical care is made using the above shown scale of expert evaluation. And herewith the average evaluation rate of the possibility to choose the physician (in points), observance of the terms of waiting for the appointment to see the doctor, diagnostic examinations, planned hospital admission are taken into account.

Possibility to choose a physician in the polyclinic according to the example is satisfied in 80% which corresponds to 4 points. The length of waiting for the appointment is observed in 73% of cases. Assessment in points equals 4.

The length of waiting for diagnostic examinations in 80% of cases corresponds to the established terms which equals to 4 points according to the scale of expert evaluations.

The length of waiting for the planned admission to the hospital in 83% of cases is within the limits specified by the conditions of the mandatory medical insurance. In accordance with the scale of expert evaluations the rate of planned hospital admission indicator equals to 4 points.

Consequently, the average number of points that evaluates the accessibility to receive health care (HCA) is as follows:

$$HCA = \frac{4\text{ p.} + 4\text{p.} + 4\text{p.} + 4\text{ p.}}{4} = 4\text{ p.}$$

The obtained evaluation in points that specifies health care accessibility will be used in the formula to determine the level of patients' satisfaction with the quality of care.

Evaluation of a complete set, competence and professionalism of medical staff

Evaluation of the competence and professionalism of medical staff (physicians and nurses) is carried out by the experts. Complete set of medical staff is determined in % to the number of people on the staff.

Evaluation of the competence is made on the basis of:

- determination of consistency between the job seniority and receiving (or confirmation) the category taking into account the established time limits;
- certificate availability;
- information concerning administrative punishments for non-fulfilling functional duties during the year;
- interviews within the limits of functional duties (if necessary).

Professionalism of medical personnel is evaluated with regard to the quality of care.

The level of the quality of care is established according to "Regulations on the System of Health Care Quality Control and Activities' Evaluation of Kemerovo Oblast Health Care Bodies and Facilities", 1995.

Evaluation of the completeness, competence and professionalism of medical staff is expressed in % with the follow-up presentation in points and use for refining of patients' level of satisfaction with the quality of care. The average quantity of the evaluation in points of all the said indicators is determined therewith (completeness of the personnel, competence, professionalism).

Consider the examples of the said above.

So, in the department #1 10 positions on staff are occupied by 7 physicians, for 15 positions of the nurses there are 10 of them. Four physicians have the 1st category and the job seniority of 10 years, three physicians having more than 10 years of job seniority have the highest category. Four nurses have the highest category. One of the nurses received her category 6 years ago. She did not take any courses of improvement in her professional skills for the last 5 years. So, her category was not confirmed. Six of the nurses have the first category. Nurse K. six months ago got administrative punishment. All physicians and nurses have certificates. Level of competence according to the papers constituted 0.8.

Scale of expert evaluations is used to assess the complete set of the personnel, competence and professionalism. The level of the complete set of the personnel is 70 %, it corresponds to 4 points. The complete set of the nurses equals to 66% or 3 points.

There is the adequate consistency between the job seniority and physicians' categories (100% - 5 points). As for the nurses, out of 10 of them none had the confirmed category and received any on-job training or somehow improved her professional skills. Consistency coefficient is 90% or 5 points.

Certificates availability corresponds to 100% or 5 points. There is administrative punishment that enables to give in this position 100% - 5 points to physicians and 90% - 5 points to the nurses. Level of competence corresponds to 80% or 4 points.

Thus, the coefficient evaluating the level of personnel competence and professionalism equals the average quantity of the points received and it constitutes:

$$\frac{4p. + 3p. + 5p. + 5p. + 5p. + 5p. + 5p. + 4p.}{8} = 4{,}5p.$$

Consequently, this coefficient that proves physicians' and nurses' competence and professionalism will be used in the formula to evaluate patient's satisfaction with the quality of care.

Evaluation technique to assess the state of logistics

Evaluation of the state of logistics is made with the help of experts and the use of "Basic Requirements and Evaluation Criteria for Health Care Facilities', Enterprises' and Organizations' Activities". Logistics evaluation is carried out with regard to functionally significant procurement with the equipment, apparatus, things used in attendance of the patients.

Logistics is assessed with the help of the above given scale to deeply evaluate patients' satisfaction with the quality of care. The data received along with the other investigation materials are used to objectively correct the results of screening.

Example. Let's assume that the inpatient department is properly provided with functionally significant equipment (100%). It corresponds to 5 points on expert evaluation scale.

Evaluation of Sanitary Anti-Epidemic State of Health Care Facilities

Evaluation of sanitation - anti-epidemic regime is made with the help of experts and employment of appropriate technique aimed at examining sanitation-hygienic conditions and anti-epidemic regime of medical facilities.

Sanitation-Hygienic Conditions Evaluation

Evaluation of sanitation-hygienic conditions in a health care facility consists of the total assessment sum of the floor area in the department (or facility), sanitation-technical state, sanitation-hygienic level of maintenance.

Evaluation of Health Facility's Floor Area

Floor area standards are determined according to the "Handbook on Health Care Facilities' Designing".

When assessing division of the department into isolation wards the following requirement is taken into account: in somatic departments for adults one isolation ward is enough, in the departments for children from 0 up to 3 years - 100%, in the departments for children from 3 up to 7 years - 50%, in infectious departments - 100%.

Evaluation of Sanitation-Technical State

The survey of sanitation-technical state envisages the following:

1. Evaluation of hot and cold water supply:
   - existence (lack) of centralized water supply and sewerage system, hot water supply;
   - non-stop water supply.

2. Evaluation of temperature regime in the wards. In this case are considered:
   - the results of air temperature measurements in the premises of the department made by SES (standard 20-22 °C, humidity 45-60%);
   - availability of casement-windows and transoms easy to reach and open, regularity in airing the wards (schedule and its observance).

3. Evaluation of provision with medical devices and furniture :
   - provision with sanitation-hygienic sets in lavatories must be in keeping with the norms (the norm is 1 set for 15 people in men's rooms, 1 for 10 in women's);
   - availability of wash-stands with elbow taps, mixers in preoperative, dressing rooms, delivery halls, in nurses' offices;
   - availability of bedside tables and chairs according to the number of beds.
   - Availability of wash-stands with hot and cold water equipped with mixers in the wards, lavatories and locks to isolation wards.
   - proper functioning of sanitation-hygienic sets (taps, washbasins, bathtubs, urinals, w.c. pans etc.).

Evaluation is made according to the universal scale.

Evaluation of Sanitation-Hygienic Maintenance

When evaluating sanitation-hygienic maintenance one must take into account the following:

- wet cleaning of the premises (not less than 2 times in every 24 hours and when it's necessary), window glasses' wiping (not less than once a month from inside and not less than once every 6 months from outside and as it gets dirty);
- using of detergent while doing wet cleaning of the premises, availability of markers on cleaning inventory and its use according to the purpose, doing main cleaning (not less than once a month washing the walls, floors, all the equipment, furniture, lights);
- availability of urns to collect litter in the corridors, lavatories and support premises;
- availability of pedal buckets in treatment rooms and other similar premises connected with the process of care;
- provision with linen according to the supply and disposition table, change of linen as it gets dirty but not less than once in every 7 days, availability of interchangeable sanitary clothes for the personnel (gowns, gloves, masks) to work with dirty linen, availability of daily stock of spare linen in the department, markers' availability on the containers for linen and the linen itself, chamber treatment of mats, blankets, pillows after the discharge of every patient;
- comfortable organization of the territory (planting of greenery on 60% of the territory, landscape area should be 25 sq.m per 1 person, division of the area into the territory for medical facilities and other buildings).

Notes. As for obstetric inpatient department (in addition) must be evaluated:

- availability of isolated departments observation and physiologic;
- availability of reserve beds to observe the cyclic filling of the wards;
- availability of wards for mothers and newborns to stay together;
- availability of locks, lavatories, showers in the wards;
- availability of delivery hall in observation department;
- availability of a complete set of premises for reserve ration of milk in physiologic department;
- availability of premises to collect and wash the dishes, to store and distribute the milk in observation department;
- availability of premises to store, sort out and pack the dirty linen (one for obstetric department and the other for observation department);
- availability of sinks with wide washbowl and mixer for convenient washing in the wards for newborns;
- change of bed linen once in 3 days, change of body linen and towels daily;
- use of sterile linen;
- observance of the terms of washing the linen in compliance with the regulation # 1230 dated December 6, 1979 (Annex #6).

Anti-Epidemic Regime Evaluation

Assessment is made on the basis of:

- health care facility examination;
- study of the Acts of SES Inspection for the period of 3 months available in medical journal;
- bacteriological objects' check-up documents.

Evaluation Technique of the Provision with Sterilization and Disinfection Equipment

Assessment is given to the availability of operating equipment and apparatus of all kinds that support functioning of the department despite whether it is located in the department itself or in the hospital: dry-heat strong boxes, autoclaves, disinfection chambers, sterilizers. Operability of the equipment is determined during the enquiry or according the journal of the equipment's functioning.

Evaluation technique of provision with disinfectants

Three days stock of disinfectants available in the department is evaluated based on 1 bed day in grams (USSR MH Decree #254 dated September 23, 1991, Annex 5):

	Chloramine	Potassium hypochloride
Somatic department	5	2,5
Infectious department	50	25
Tuberculosis department	100	50

Evaluation Technique of the Control of Anti-epidemic Regime Provision

Sterility control of environmental objects is made in the departments of surgical profile, therewith are examined:

- aerial environment;
- various surfaces of the objects;
- surgical instruments;
- syringes, needles;
- blood transfusion systems of multiple usage;
- probes, catheters, bougies, rubber gloves and other things made of rubber and plastics;
- sutures prepared for making use of;
- surgeons' hands and skin on the surgery field.

SES and Disinfection Station make check-ups not less than 2 times a year, bacteriological laboratories of medical facilities check the environment once a month, sterility of the instruments, dressing supplies, operative linen, surgeons' hands and surgery field skin (spot check) - once a week. Basis - USSR MH Decree "On Health Care Improvement to the Patients with Purulent Surgical Diseases" dated December 28, 1989.

In obstetric departments are examined:

- aerial environment;
- surface of the instruments;
- medical instruments, dressing supplies and sutures;
- breast milk, drinking liquids used for newborns, oils used for every day toilet of the newborns;
- clothes and hands of support personnel;
- medicines.

SES and Disinfection Stations, medical facilities' bacteriological laboratories make check-ups not less than once a quarter. Basis: USSR MH Decree # 1230 dated December 28, 1989 "On Prevention of Nosocomial Infections in Obstetric Inpatient Departments".

In other inpatient departments cultures from the environmental objects are taken not less than once a year. Basis: USSR MH Decree # 254 dated "On Development of Disinfection Activities on the Country".

A pilot study shows that labor consumption of the evaluation procedure according to this technique is 2,5-3 hours (taking into account preparation of all the papers) and requires serious preliminary training of a physician-expert.

Consider the example of the technique to evaluate sanitation - anti-epidemic situation in a health care facility.

So, floor area in the hospital K. was in conformity with the standards, there was sufficient quantity of isolated wards in the department. While estimating sanitation-technical state of affairs it has been determined that there were no complains as for hot, cold water supplies, sewerage, temperature regime. Analysis of hospital's provision with medical devices and furniture points to the lack of sufficient number of bed-side tables and chairs, availability of taps that are out of order, broken washbowls.

While assessing sanitation-hygienic maintenance there was found insufficient supply of linen according to the table and lack of daily set of linen in the department. Study of the health care facility provision with sterilization and disinfection equipment pointed to the availability of operating equipment. Disinfection supplies are in sufficient quantity in the departments. Presence of pathogenic flora in 20 % of cultures (acceptable error is 5%) was identified by the method of medical instruments' and environmental objects' sterility control.

Evaluation of sanitation - anti-epidemic state is carried out with the help of universal expert scale. The technique is assumed to define evaluation in points of sanitation-hygienic conditions and anti-epidemic regime of health care facilities.

Sanitary-hygienic conditions' evaluation (as mentioned above) takes into account:

- observance of floor area standards and availability of isolated wards;
- present state of hot and cold water supplies as well as sewerage;
- temperature regime in the wards;
- provision with medical devices.

Analysis of the antiepidemic regime present state (as has been indicated) is based on the estimation of:

- provision with sterilization and disinfection equipment;
- provision with means of disinfection;
- medical instruments' and environmental objects' sterility.

Thus, evaluation of sanitation - anti-epidemic regime is made according to 7 basic positions. In our example there are deficiencies (insufficient provision with medical devices, insufficient provision with linen, presence of pathogenic flora in 20% of cultures) as regards three above mentioned positions.

Consequently, the coefficient that characterizes the present state of sanitation - anti-epidemic regime (SAER) in a health care facility equals:

$$SAER = \frac{4 \times 100\%}{7} = 57\%$$

or according to expert evaluation scale - 3 points. The obtained coefficient will be used in the formula to assess patient's satisfaction with the quality of care.

Sanitation-Hygienic Diet Evaluation

Complex sanitation-hygienic diet evaluation is made with the help of an expert and employment of appropriate technique based upon the analysis of sanitation-technical state of the food unit (kitchen), its sanitary hygienic maintenance, observance of anti-epidemic regime and determination of the quality of a diet.

Characteristics of the Food Unit (Kitchen)
Sanitation-Technical State

Sanitation-technical state of the food unit (kitchen) in the department is assessed according to the following parameters:

1.Estimation of premises' sufficiency (floor area as compared to the standards):
- premises (cooled or not cooled) to store the food;
- production shops (preparation: for meat, fish, vegetables, for poultry cutting; cooking: hot, cold, pastry; dishwashing);
- room for the distribution of the ready food from the kitchen to the wards;
- support premises: for personnel, for inventory and tare storage, for linen;
- buffets canteens in the departments.

2.Estimation of the shops' and premises' mutual arrangement. Mutual arrangement of the shops must provide production line of technological processes eliminating the meeting of the raw food and cooked food, dirty dishes and cooked food.

3. Estimation of the equipment sufficiency for:
- storage of the food and perishable prepared food;
- heating equipment for simultaneous heating of the prepared food for all the patients (2 or 3 shift system of food preparation is forbidden), for making dietary dishes.

4. Estimation of technological inventory sufficiency (boards for food cutting, knives, scoops etc.). Inventory used for raw food processing must not be used for boiled food (marking is required).

5. Estimation of hot and cold water supply in the food unit (kitchen):
- availability of hot water supply or non-stop boiler;
- non-stop cold and hot water supply.

6. Estimation of the light in the places for food preparation:
- in meat-fish shop;
- in the cold snacks shop;
- in the place where the prepared food are roasted;
- in the place for distribution of the dishes.

7. Availability of the conveniences to observe the rules of personal hygiene for the kitchen staff (shower, sanitation checking unit, handwashing stands).

Evaluation of the Kitchen (Food Unit)

Sanitation-Hygienic Maintenance

Sanitation-hygienic maintenance evaluation of the kitchen and anti-epidemic regime observance is made with the help of an expert.

In the estimation process are considered:

1. Operability of technological freezing and heating equipment. Timely removal of malfunctions in the equipment (within a day).
2. Sanitation rules observance of the operating freezing, heating and technological equipment.
3. Observance of sanitation rules concerning particular perishable food, vegetables and dry food storage:

- in freezing chambers aimed at the storage of meat, fish in the frozen state where the temperature regime must be - 5 - 10°C and below. Depending on the temperature regime which must be daily indicated in the journal the expiration date of perishable food is determined;
- in the cooled chambers for dairy group products the temperature must be not less than +2 - +6°C. To store vegetables, fruit, sour and salted vegetables - +6 - +8°C;
- record of the food purchased into a health care facility in conformity with the established terms of their realization (particularly for perishable food) must be kept either in gross book or in files. It is prohibited to use the products with expired date.

4. Observance of sanitation rules for using the inventory, plates and dishes to cook the raw and prepared food according to the marking. Technological equipment intended for processing of the raw food may not be used for processing the prepared food.

5. Temperature regime and exposition (time) observance for food preparation. When using steam processing to cook the dishes the time for preparation is 50 min. - 1 hour, when roasting and further doing to a turn of meat and fish dishes - 20-25 min., when doing mashed vegetables boiling milk must be added etc.

6. Sanitation rules observance in portioning and distributing the cooked food in the kitchen according to the menu-apportionment. Availability of the control portion at the place of distribution, distribution roll to distribute prepared food in the department.

7. Observance of the rules for washing and treatment of kitchen dishes. There must be washing powder and other means permitted by the State Committee of SES in the dishwashing room .

8. Observance of the rules for cleaning the premises. Availability of the marked inventory to clean the premises (separately for lavatories and production shops), its employment according to the purpose. Doing major cleaning not less than once a month.

Evaluation of Anti-Epidemic Regime Observance in the Kitchen (Food Unit)

Evaluation is made on the basis of:

- personnel sanitation books' check-up on their health status and admission to work in the kitchen;
- check-up of the journals concerning the availability of purulent diseases, this record must be kept daily ;
- protocols of laboratory tests cultures from equipment, inventory, hands of the personnel concerning the presence of colon bacillus and staphyloccoci;
- absence of emergencies in sewerage water supply pipelines of the kitchen (food unit);

- provision with means of disinfection and observance of the rules to use them.

Diet Evaluation Received by the Patient in the Inpatient Department

It is evaluated on the basis of experts' examination acts: chief of medicine (gynecologist, pediatrician), dietitian and expert from State Center for Sanitation Epidemiological Surveillance.
1. Correspondence of the food expenses to the standards of a food set. Determination of the average monthly food expenses per bed day. Deviation by more than 3 % is not allowed.
2. Availability of a card-index - distributor, its employment, correspondence of the dishes' output and their chemical composition to official documents. Correspondence of the dishes' output and their chemical composition is confirmed by the results of laboratory tests carried out by the SSES Center not less than once in a quarter.
3. Availability of a summary menu, observance of the requirements to working up of the menu (variety of food, calorific value distribution within a day), order of its approval, marks regarding the prepared food output .
4.Gustatory properties and correspondence of the food to the requirements of medical cookery. Availability of complains as for the food quality, percentage of "wastes" while cooking the food (not more than 15% can be wasted, if 15% it means poor quality of food cooking).
5. Availability the documents and keeping the record (production journal, tasting the food, availability of emergencies, personnel's journal "Health", temperature regime journals of the freezing equipment).
6. Correspondence of the dietetic tables nomenclature to the patients' composition.
7. The order of prescription and record keeping concerning the prescription of a diet to a patient in the admission office, enrollment of the patients for a diet (3-5 days spot check in any month of the year);

- arrangement of dietetic meals in the departments of gastroenterology and endocrinology. Keeping the exchange cards for patients with diabetes, calculation of the ration's chemical composition, food weighing etc.;
- the order of additional diet prescription;
- studies of the diets' effectiveness, introduction of special diets, 'unloading' days;
- patients' weight check-up (availability of the scales in the department), determination of patients' percentage with high weight, frequency of obesity diagnoses and prescription of treatment directed at the cause of disease;
- explanation to the patient the idea of the diet and its effect while prescribing a certain diet;
- arrangement of a small display regarding the dietetic feeding giving description to the main dishes used in each department;
- sanitation-enlightening work among the patients regarding the issues of dietetic feeding.

8. Arrangement of dietetic feeding in the department (aesthetics of food, diet supervision on part of the chief of the department, staff physicians, chief nurse.

Recommendations' Evaluation Given to Outpatient Patients

Sanitation-hygienic evaluation technique must be considered taking an example.

Example. In the process of complex sanitation-hygienic evaluation of the department's kitchen (food unit) the following has been established.

Structural division has sufficient set of premises at its disposal providing production line of technological processes. Food unit is completely provided with inventory and equipment. There are no claims as for water supply. When assessing the light of the working places it was established that cold snacks' shop, the place for portioning the dishes as well as prepared food

distribution area are insufficiently lighted. The conveniences to observe personal hygienic rules for the kitchen staff are created.

Sanitation-hygienic food unit maintenance analysis enables to indicate the existence of freezing equipment that is out of order, besides the dairy products with the expired date were found.

When assessing anti-epidemic regime observance in the food unit (kitchen) it was discovered that three workers of the kitchen do not have sanitation books.

Examining organizational aspects of meals in the conditions of the inpatient department it was pointed to the incompatibility of dietetic tables to the composition of the patients.

The use of universal expert scale is expected to estimate sanitation-hygienic state of arranging the meals. As it has already been noted the technique is based on the determination in points of sanitation-technical state of the food unit, its sanitation-hygienic state, its sanitation-hygienic maintenance, observance of anti-epidemic regime and qualitative composition of food. In this regard, as has been mentioned above, sanitation-technical state analysis of the food unit is intended to evaluate:

- sufficient space of the premises;
- location of the shops in relation to one another;
- equipment sufficiency;
- inventory sufficiency;
- hot and cold water supply;
- lighting of the working places;
- observation of the personal hygienic rules.

Sanitation-hygienic maintenance expertise of the food unit takes into account:

- equipment being in good order;
- observing sanitary rules of the equipment maintenance;
- observing sanitary rules of food storage;
- observing sanitary rules when using the inventory;
- maintaining exposition of temperature regimes;
- following the rules of portioning;
- observance of the rules of washing and kitchen plates and dishes treatment;
- following the rules of cleaning of the premises.

Evaluation of anti-epidemic regimes' observance is made on the basis of:

- examination of the workers' sanitation books on the state of their health and their access to work in the food unit;
- check-up of the journal regarding the availability of purulent diseases, this record must be kept daily;
- protocols of the laboratory tests of the cultures from the equipment, inventory, hands of the staff regarding the presence of colibacillus and staphylococci;
- absence of the emergencies in the sewerage and water supply network of the food unit;
- provision with disinfectants and observance of the rules to apply them.

Analysis and evaluation of patients' meals in the inpatient department takes into account:

- correspondence of the products' expenses to the standards of a food set;
- availability of the card-index distribution, making use of it, correspondence of the dishes output and their chemical composition to the official documents;

- summary menu availability, observing the rules of drawing the menu;
- gustatory properties and correspondence of the dishes to the requirements of medical cookery;
- availability of the records and keeping them;
- correspondence of the dietetic tables' nomenclature to the composition of the patients;
- prescription order record-keeping regarding diet prescription to the patient in the admission office, enrollment of the patients to receive meals;
- organization of dietetic meals in the department.

Consequently, sanitation-hygienic evaluation of the meals is made according to 28 main positions. In the example considered there are complaints regarding five above mentioned positions (insufficient light on the working places, inoperable freezing equipment, food with the expired date of realization, not all members of the staff have sanitation books, dietetic tables' nomenclature does not correspond to the composition of the patients).

Thus, coefficient pointing to sanitation-hygienic state of meals arrangement equals to:

$$\frac{23 \times 100\%}{28} = 82\%,$$

it corresponds to 4 points according to expert evaluations scale.

Medication Provision Examination and Evaluation

Examination of the medication provision status is made with the help of experts by estimating the standards of medication provision and pharmaceutical order in a health care facility.

Medication Provision Standards Evaluation

When assessing medication provision 10-15 standards selected at random are subject to expert review taking the official list of medicines. Medication provision standards' evaluation indicator is determined based on the proportion of the official and actually available list of medicines as well as the expert evaluation scale.

Evaluation of Pharmaceutical Ordering

Pharmaceutical ordering evaluation is aimed at providing objective expertise on fulfilling the technology of the medication procurement of the hospital, department, polyclinic by the medical staff and it estimates:

- medicines' delivery to the department;
- conditions of storage for medicines' and other things intended for medical purposes;
- provision of drugs' and poisonous medicines' inaccessibility;
- observance of the medicines' expiration date;
- stock of medicines.

Evaluation of Medicines' Delivery to the Department

When evaluating medicines' delivery to the department one must take into account:

1. Special tare availability to deliver the medicines.
2. Use of additional napkins for parenteral injection solutions.

Universal scale is employed when making the assessment.

Evaluation of Storage Conditions for Medicines and Dressing Supplies

When estimating the storage conditions of medicines and dressing supplies one must take into account:

1. Availability of cupboards, refrigerators.
2. Division of medicines into groups according to the way they are used, according to the effect they give (ordinary, with strong effect, poisonous), according to their physical-chemical properties (with strong smell, coloring, thermolabile, supersensitive).
3. Storage of medicines separately from solutions aimed at technical purposes.
4. Observance of recommended storage conditions for separate groups of medicines.
5. Availability of the lists of the highest one time and daily doses for poisonous medicines, drugs and medicines with strong effect. Table of antidotes.

Universal scale is used to make an assessment.

Evaluation of Security Provision for Drugs and Poisonous Substances

Provision of security for drugs and poisonous substances is connected with:

1. Availability of strong boxes, safes, signaling system, iron-bars, metal doors in the main depository of the hospital. Access to it is by the Department of Internal Affairs.
2. There must a special order for the people who have the right to work with drugs.
3. The procedure of obtaining and writing-off the narcotic supplies must be checked in the department (special journal), drugs must be kept in metal box (cupboard), there must be a certain order of registering the drugs from shift to shift.

Evaluation of the Stock of Medicines and Other Things for Various Medical Purposes

When revising the stock of medicines and other things for various medical purposes one must take into account:

1. Supplies of medicines for the ongoing needs in the department (required for not more than 10 days, poisonous - for not more than 5 days, drugs - required for 3 days).
2. Packing of medicines (made only at a factory, pharmacy indicating the way of taking the medicine, supplied with necessary additional labels).
3. Absence of the cases when medicines were not packed, labels were changed, when medicines were transferred, poured from one container to another.

Universal scale is used to carry out the evaluation.

Medicines' Expiration Date Observance Evaluation

When examining the observance of medicines' expiration date one must consider:

1. Consistency of the time aimed for the use of medicine with its shelf-life indicated on original packing.
2. Length of storage for the pierced bottles with sterile solutions (must be used within 24 hours after being first time pierced).

Universal scale is used to make an assessment.

Thus, evaluation of pharmaceutical order is made according to 15 positions (delivery of medicines to the department - 2 positions; storage conditions for medicines and dressing supplies - 5 positions; provision of inaccessibility to drugs and poisonous substances - 3 positions; stock of medicines and other things for medical purposes - 3 positions; observance of expiration date - 2 positions).

Consider the example of evaluation technique regarding the provision with medicines.

When examining 15 standards regarding medicines' supplies to the hospital K. it was found that there were no medicines to meet the requirements concerning 3 standards; when assessing the system of medicines' delivery it pointed to the unavailability of special containers for delivery.

Conditions for medicines' and dressing supplies storage are observed. Security of drugs and poisonous substances is provided but there is no special permit regarding the people who have the right to work with drugs.

When evaluating the stock of medicines and things that are used for medical purposes no violations were found.

Medicines' expiration dates are observed.

Evaluation indicator of the provision with medicines (MP) aimed at describing the state of provision with medicines and pharmaceutical ordering in a medical facility is determined on the basis of the data received and with the help of expert evaluations' scale; actual medication procurement according to the spot check is 80% that corresponds to 4 points according to expert evaluation scale.

Violations of pharmaceutical order were identified in two out of fifteen positions that makes up 13,3%. Consequently, indicator of pharmaceutical order procurement equals to 86,7% or 4 points according to expert evaluation scale.

Thus, indicator of medicines'procurement (MP) equals to:

$$MP = \frac{4p. + 4p.}{2} = 4p.$$

Resulting indicator will be used in the formula for patients' satisfaction evaluation with the quality of care.

Evaluation Technique for Medical Staff Adherence to Ethical and Professional Standards

In order to assess the adherence of medical staff to ethical and professional standards it is necessary to interview 10-15 patients who were treated or examined in health care facilities and with the help of expert evaluation scale to draw the conclusions regarding the problem under study with follow-up correction of the materials obtained according to screening surveys.

For example. Out of sixty patients interviewed in six departments of a multiprofile hospital two patients pointed to rudeness and careless treatment of some nurses. Violation of professional standards was identified in 3% of cases. Consequently, AED makes up 97% or 5 points according to expert evaluation scale.

The obtained quantity will be included into the formula of patients' satisfaction evaluation with the quality of care.

Thus, using the above given formula of patients' satisfaction evaluation with the quality of care:

$$PSE = \frac{AC + CCP + L + SAER + OM + MP + AED}{S}$$

we'll get:

$$PSE = \frac{4p. + 4,5p. + 5p. + 3p. + 4p. + 4p. +5p.}{7} = 4,2p.$$

So, patients' satisfaction rate with the quality of care is 4,2p. with the maximum possible quantity of 5p.

Outpatient Patient's Questionnaire

We kindly ask you to evaluate the conditions of care delivery according to the five points' scale. For this purpose please circle or tick the number of points that somehow express your opinion. The lowest assessment in points is 1, the highest - 5 points. Your evaluations will help us to reveal the shortcomings and improve our performance.

We thank you in advance for help!

1. How do you assess:
   - health care services organization (accessibility) in the polyclinic

1	2	3	4	5

(polyclinic's operating schedule, registration office performance, arrangement of physicians' working hours)

2. - competence and professionalism

1	2	3	4	5

(usefulness of physicians' advice regarding medication treatment, diet, medical herbs therapy; independent solution of the problems related to diagnostics, treatment or enthusiasm regarding consultations from other specialists, chief of the department, enthusiasm concerning wide spectrum of diagnostic investigations)

- of the nurses

1	2	3	4	5

(useful recommendations, level of skills regarding manipulations' and procedures' performance)

3. - state of logistics

1	2	3	4	5

(availability of disposable instruments, syringes, narrow or wide range of diagnostic and therapeutic procedures performed in this polyclinic, referrals' frequency to examinations and treatment in other health care facilities)

4. - status of sanitation-hygienic conditions

1	2	3	4	5

(good, bad)

5. - state of medication procurement

1	2	3	4	5

(if medicines prescribed by physician are always available in the pharmacy)

6. - polite and considerate attitude on part of the physicians

1	2	3	4	5

on part of the nurses

1	2	3	4	5

Inpatient Patient's Questionnaire

We kindly ask you to evaluate the conditions of care delivery according to the five points' scale. For this purpose please circle or tick the number of points that somehow express your opinion. The lowest assessment in points is 1, the highest - 5 points. Your evaluations will help us to reveal the shortcomings and improve our performance.

We thank you in advance!

1. How would you assess:

- health care services organization in the facility

1	2	3	4	5

(waiting time for planned hospital admission, waiting time in the admission office, timeliness of primary examination by attending physician, timeliness of diagnostic and therapeutic procedures' prescription and etc.)

2. - competence and professionalism

1	2	3	4	5

of physicians

(if you are satisfied with physician's advice, if therapeutic procedures and medications are changed frequently, if their change is justified, participation of the departments' chiefs in treatment-diagnostic process etc.)

of the nurses

1	2	3	4	5

(level of skills to perform manipulations and procedures, if the explanations concerning the nature of procedures, advice are given etc.)

3. - state of logistics

1	2	3	4	5

(availability and quality of bed linen, plates and dishes, things used for taking care of the patients)

4. - state of sanitation-hygienic conditions

1	2	3	4	5

5. - organization of meals

1	2	3	4	5

(quality of cooking, assortment of dishes, their temperature, sufficiency)

6. - state of medication procurement

1	2	3	4	5

7. - polite and considerate attitude on part of physicians

1	2	3	4	5

on part of the nurses

1	2	3	4	5

Questionnaire

Dear patient, your answers to the questions of this questionnaire will help us to make valid evaluation of the quality of care delivered to you.

We appreciate your sincere answers!

1. Have you ever received treatment in an inpatient facility?
   yes
   no

   - if yes, when was it?
     last year
     a year ago
     two years ago
     more than two years ago

   - when you were discharged what the outcome was?
     recovered
     improved
     without any changes
     hard to answer

2. How do you assess the conditions of stay in an inpatient department?

   - sanitation conditions of the wards?

     bad
     satisfactory
     good
     hard to answer

   - number of patients in the ward? (put the number _____)

     appropriate
     better less
     hard to answer

   - temperature regime in the ward?

     appropriate
     inappropriate
     hard to answer

   - meals patients receive in the department?

     good
     satisfactory

   - if the food is adequate as for the diet prescribed to you?

     yes

no
hard to answer

- how do you assess the conditions of stay in this health care facility as compared to others?

better
worse
hard to answer

3. Please evaluate the amount of care received:

- are you satisfied with the amount of diagnostic examination prescribed to you?

yes
no
insufficient
hard to answer

- what type of examination you consider appropriate to diagnose you disease:

_____

- when examination was started:
on the first day
on the second day
on the third day
and so forth

- how quickly the attending physician examined you:

in an hour
in two hours
in three hours
more than three hours
on the second day

- when the treatment was prescribed:

on the first day
on the second day
later than on the second day

- are you satisfied with the amount of treatment?

yes
no
hard to answer

- do you get the medicines from home?

yes
no

- if yes, how many medicines do you get?

one
two
three
and more

- have the injections been prescribed?

yes
no

- do you receive physiotherapy?

yes
no

- have there been complications from the treatment you received?

yes
no

- if yes, what kind of complications?

_____

4. How do you asses medical staff in the department?

- your attending physician?

him being considerate towards the patients - according to five points scale -
his competence - according to five points scale -

- would you prefer to change your attending physician?

yes
no
hard to answer

- what are your wishes to him?

_____

- how do you assess the attitude of physicians on duty to the patients?

in points from 1 to 5, 1 - bad, 5 - excellent _____

- are there any round in the evening time?

yes
no

- how fast is the response of the physician on duty when you call for him ?

within an hour
within two hours

in more than two hours

- are you satisfied with the nurses?

yes
no
partially
hard to answer

- if not then what?

_____

5. How do you assess the dynamics of your state?

- improved
- without changes
- worsened
- hard to answer

6. Will you choose the same medical facility in case of your probable hospital admission?

yes
no
hard to answer

Your proposals as for performance improvement _____

_____

_____

_____

_____

_____

_____

_____

_____

_____