**KHARKOV NATIONAL MEDICAL UNIVERSITY**

**DEPARTMENT OF PUBLIC HEALTH AND MANAGEMENT OF HEALHTCARE SYSTEM**

**ECONOMICS OF PUBLIC HEALTH**

**Methodical recommendations for independent work (to prepare for practical lessons) for 6th and 5th course of foreign students of medical and dentist faculty according credit–module system with requirements Bologna process.**

on professions: 7.12010001 “General medicine”

 7.12010002 “Pediatry”

 7.12010005 «Dentistry»

Student:

Faculty: medical

Course: 5, 6 , Group:

The Methodical recommendations are formed in help for students for performing the independent work on subject social medicine, organization and economics of public health. The Methodical recommendations according the program of the education student of medical faculty of the high educational institutions III – IV level to accreditation. They include all topics of discipline, list of recommended literature. They comprise of itself all topics on discipline, which are stood on practical lessons, each of them has a following content:

– a purpose of the lessons;

– a list required for assimilation of discipline of the knowledge’s and skills;

– an individual tasks for independent work.

Performing the independent work on all amounts is an obligatory condition of the education program.

The Practical lessons are conducted according to timetable of the university. They begin with announcements of the topic, check of base level knowledge’s of the students with test problems. Then, the teacher proceeds with analysis of the topic and test problems. Fastening the studied material is conducted by performing the individual independent work. At the end of the lesson teacher takes whole volume of the executed functioning and signs it.

The organization of the education process is realized for credit – module system in accordance with requirements Bolon process.

The assimilation of the material practical lesson (current control) is checked according to concrete purposes of the module. Total final control is realised on the last practical lesson with use the programmed methods of the education, situational tasks, questioning on standardized control questions.

The types of the education work according to curriculum are: lectures, practical lessons, independent work of students, consultations.

The study 1st part discipline (for students of medical faculty) – economics of public health – is provided on 6th course, is herewith provided 39 academic hours, of them practical lessons – 25 hours and independent work of students – 14 hours.

For students of dental specialty, the study of economics of public health is provided on 5th course, is herewith provided 45 academic hours, of them lecture – 10 hours, practical lessons – 20 hours and independent work of students – 15 hours.

Not qualified are considered students, which had during study of discipline not perfected missed lectures, practical lessons and unsatisfactory estimations.

**Economics of public health**

**TOPIC PLAN OF PRACTICAL LESSONS**

|  |
| --- |
| **Part 1.** **Theoretical and organizational bases of economics of public health.** |
| **№****Lesson** | №**Topic** | **Topics of practical lessons** | **Pg.** |
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| Topic № 2 | Public health as an economic category. | 9 |
| Topic № 3 | Planning and prediction in healthcare system. | 10 |
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**The Results to progresses of the student**:

|  |  |  |
| --- | --- | --- |
|  | Quantity of marks | Signature of the teacher |
| Surname, name of students |  |  |
|  Total average score |  |  |

Program on Social Medicine, Organisation and Economics of Public Health for higher medical educational establishments of Ukraine of III – IV accreditation levels are drawn for specialties: 7.110101 “General Medicine” 7.110104 “Pediatrics” of 1101 “Medicine” degree program. Discipline is studied at the final year.

**The program was developed in accordance with the following legal documents:**

 – Educational and qualification level (EQL) and Educational and professional program (EPP) of training approved by order of MES of Ukraine No. 239 “On approval of components of higher education standards for 1101 “Medicine” degree program» dated 04/16/03;

 – Experimental curriculum drawn out on the principles of European credit transfer system (ECTS) and approved by order of MH of Ukraine No. 52 “On approval and introduction of new curriculum for “medical specialist» qualification level in higher educational institutions of III – IV accreditation levels in Ukraine for “General Medicine” and “Pediatrics” degrees” dated 01.31.2005.

 – Guidelines for academic disciplines curriculum approved by order of MH of Ukraine No. 152 “On approval of guidelines for academic disciplines curriculum” dated 3.24.2004, as amended and supplemented by order of MH of Ukraine No. 492 “On amendments to guidelines for academic disciplines curriculum» dated 10.12.2004;

 – Order of MH of Ukraine No. 148 “On implementation of Bologna Declaration in higher medical and pharmaceutical education” dated 01.31.03;

 – Regulations on the system of students’ educational activity evaluation under credit – modular educational system (“Medical education in the world and in Ukraine”. Approved by MH of Ukraine as a manual for lecturers, masters and postgraduate students. “Kiev kniga plus”, 2005).

 – Order of MH of Ukraine No. 414 dated 07.23.2007 “On amendments to order of Ministry of Healthcare of Ukraine No.52 dated 01.31.2005 “On approval and introduction of new curriculum for “medical specialist” qualification level in higher education institutions of III – IV accreditation levels in Ukraine for “General Medicine”, “Pediatrics” and “Medical preventive work” degrees.

**The kinds of education work are**

1. practical lessons;

2. independent work;

3. consultations

**Practical exercises include:**

1. to be able to elabourate strategic and tactic plans of economic development of public health establishments.

2. determine marketing strategy wich maximal guarantees the necessity of medical aid of population.

3. determine price policy which directs to realization of strategic and operational tasks of public health establishments.

4. composing of business – plan during organization of business activity in field of public health.

5. to be able to determine insurance contribution for state obligatory and voluntary medical insurance.

6. to be able to calculate the salary for medical staff.

7. determine and estimate the basic indexes of economical activity of medical establishment**.**

8. determination and analisis of medical, social and economical efficiency of public health establishments.

9. to be able to estimate the efficiency of medical technologies.

**Economic of public health**

 – lays the groundwork for an arrangement of economic and financial analysis of medical and pharmaceutical industries.;

 – contributes to formation of economic thinking of Higher Educational Medical Institutions students.

 – provides development of management solutions to meet public needs in healthcare using marketing.

Volume of students’ academic load is described in ECTS credits which are calculated after successful assimilation of a module discipline.

Students are advised to keep records of tasks completed.

Theme learning (current control) is checked on practical classes in accordance with the objects stated for informative modules. To determine students’ attainment level there shall be tests, case studies, surveys according to standardized test questions

**The final check of part of discipline learning is made after they are completed**. Students’ achievements in the discipline are exposed in the rating and are marked according to multicredit scale as an average note of all corresponding modules, and are determined after ranking on ECTS scale and traditional scale adopted in Ukraine.

**THE OBJECT OF STUDYING THE “economics OF PUBLIC HEALTH’’**

The Purpose of the study economics of public health and its final objectives are fixed in accordance with educational – professional program of preparing the physician for block physician – preventive discipline and are a reason for development of the contents of discipline.

On the base of final integer of discipline and profound modules are worded concrete purposes, which provide the achievement to final objective.

**THE FINAL OBJECTIVE:**

 – interpreted the economic laws of public health and distinguish the basic economical categories;

 ***–*** to be able to determine the volume of ambulatory polyclinic, hospital, urgent aid;

 **–** interpreted contents and key question of economic of public health, their peculiarities in medical establishments;

 ***–*** to be able to apply the methods of planning in system of public health (strategic, operational, directive, indicative, contractual, entrepreneurial);

 – to be able to planning the quantity of medical staff;

 ***–*** to be able to apply to elabourate strategic and operative plans of activity of medical establishment and make SWOT – analysis.

**FORMS OF THE CONTROL**

The Current control is realized on each practical lesson according to concrete purpose of the topic, during the individual working the teacher with student. There are used objective (standardized) of the form of the control theoretical and practical preparation of the students. The score for each topic in a practical class may be from 3 to 5 – if the student completes the tasks, or 2 – if the student did not complete the tasks.

The amount of marks, which can get the students at assimilation of the total current control for student of medical faculty – from 70 till 120, for students of dentistry speciality – from 120 till 200. The total current assessment is the average score for all the topics transformed on a special scale. The final mark for students 6th courses including for the current education activity – 120 marks (with both parts of discipline) and on result of the final control – 80 marks.

**Total final control:**

Total final control is realised on termination of the study of the discipline.

To total control are allowed students workable all types of the functioning,provided by education program and at study of the module have typed the amount an marks, not less minimum. The Form of the undertaking the total control must be standardised and include control theoretical and practical preparation. The concrete forms of the checking on discipline are defined in worker to education program.

The Maximum amount marks total control is equal 80. Final total control is considered enrolled if student has typed not less 50 marks.

**PART № 1. ECONOMICS OF PUBLIC HEALTH**

**Substantial part**

**Theoretical and organizational bases of economic of public health**

**Study objective:**

**THE FINAL OBJECTIVE:**

 – interpreted the economic laws of public health and distinguish the basic economical категорії;

 ***–*** to be able to determine the volume of ambulatory polyclinic, hospital, urgent aid.

 **–** interpreted contents and key question of economic of public health, their peculiarities in medical establishments of different kinds of property.

 ***–*** to be able to apply the methods of planning in system of public health (strategic, operative, directive, indicative, contractual, entrepreneurial);

 – to be able to planning the quantity of medical staff.

 ***–*** to be able to apply to elabourate strategic and operative plans of activity of medical establishment and make SWOT – analysis.

**The Recommended Literature:**

**Basic literature**

1. Health economics: textbook / V. Moskalenko,V. Taran, O. Hulchiy [at al]; ed. by V. Moskalenko. – Vinnytsia: Nova Knyga, 2010 . – 112 p.
2. Агарков В.И. Теоретические основы экономики здравоохранения : учебное пособие для медицинских вузов / В. И. Агарков, С.В. Грищенко, Г.К. Северин и др.; под ред. В.И. Агаркова. – Донецк : «Ноулидж» (донецкое отделение), 2010. – 267 с.
3. Ахламов А.Г. Економіка та фінансування охорони здоров'я : навч.-метод. посіб. / укладачі: А.Г. Ахламов, Н.Л. Кусик. – Одесса : ОРІДУ НАДУ, 2011. – 134 с.
4. Економіка охорони здоров’я: підручник / В.Ф. Москаленко, О.П. Гульчій, В.В. Таран та ін.; під ред. В.Ф. Москаленка. – Вінниця: Нова Книга, 2010. – 288 с.
5. Москаленко В.Ф. Принципи побудови оптимальної системи охорони здоров’я: український контекст. Монографія. – К.: „Книга плюс”, 2008. – 320 с.
6. Москаленко В.Ф., Грузєва Т.С., Іншакова Г.В. Право на охорону здоров’я у нормативно-правових актах міжнародного та європейського рівня. – Контраст, 2006.– 296 с.
7. Мочерный С.В., Некрасова В.В. Основы организации предпринимательской деятельности: учебник для вузов./ Под общ. ред. проф. С.В.Мочерного. – М.: «Приор – издат», 2004. – 544 с.
8. Экономика здравоохранения / И.М. Шейман, С.В. Шишкин, М.Г. Колосницина; под. ред. Колоснициной М.Г., Шеймана И.М., Шишкина С.В. / Издатель: Высшая школа Экономики, 2009. – 480 с.
9. Экономика здравоохранения: учебник / В.Ф. Москаленко, В.В. Таран, О.П. Гульчий [и др.]; под ред. В.Ф. Москаленко. – Винниця: Нова Книга, 2010. – 144 с.
10. Lectures for economic of public health. Department of social medicine, OEPH, KNMU

**Auxiliary literature**

1. Гаркавенко С.С. Маркетинг: Підруч. К.: Лібра, 2002. – 712 с.
2. Громадське здоров’я: підручник для студ. вищих мед. нав. закладів / В.Ф. Москаленко, О.П. Гульчій, Т.С. Грузєва, [та ін.]. – К.:ВД «Авіцена», 2012. – 560 с.
3. Зюзін В.О., А.В.Костріков, В.Л.Філатов Статистичні методи в медицині та охороні здоров’я. Полтава. 2002.
4. Европейская база данных «Здоровье для всех». Копенгаген: ЕРБ ВОЗ. – 2013 г. // http:www.euro.who.inf
5. Здравоохранение и расширение Европейского Союза. Редакторы Мартин Мак-Ки, Лаура Мак-Лехоз, Эллен Нолт – Европейская обсерватория по системе и политике здравоохранения. 2006.– 291 с.
6. Кэмпбелл Р. Макконнел, Стэнли Л. Брю. Экономикс: принципы, проблемы и политика. Пер. с анг. 11-го изд. – К., Ха Гар-Демос, 1998. – 785 с.
7. Основні шляхи подальшого розвитку системи охорони здоров’я в Україні / Під заг. ред.. В.М.Лехан, В.М.Рудого. – К. , Вид-во Раєвського, 2005. – 168 с.
8. Основы политики достижения здоровья для всех в Европейском регионе ВОЗ. Обновление 2005 г. Европейская серия по достижению здоровья для всех, №7. – Копенгаген: ЕРБ ВОЗ, 2005. – 99 с.

**Informational resources**

1. U.S. National Library of Medicine – Национальная медицинская библиотека США – <http://www.nlm.nih.gov/>

2. Государственная научно-педагогическая библиотека Украины им. В.О. Сухомлинского – <http://www.dnpb.gov.ua/>

3. Научная библиотека Харьковского национального медицинского университета – <http://libr.knmu.edu.ua/index.php/biblioteki>

4. Национальная библиотека Украины им. В.И. Вернадского – <http://www.nbuv.gov.ua/>

5. Национальная научная медицинская библиотека Украины – <http://www.library.gov.ua/>

6.Репозитарий Харьковского национального медицинского университета – http://repo.knmu.edu.ua/handle/123456789/375/browse?type=title&submit\_browse=%D0%9F%D0%BE+%D0%B7%D0%B0%D0%B3%D0%BB%D0%B0%D0%B2%D0%B8%D1%8E

7. Харковская государственная научная библиотека им. В.Г. Короленка – http://korolenko.kharkov.com

**TOPIC № 1**

**ECONOMICS OF PUBLIC HEALTH AS A SCIENCE**

**Purpose of the class.** To familiarize students with the fundamentals of economic mechanism in healthcare system and ways to improve it.

**Know.** Health economics: methods, goals, objectives and importance of the course in the education system. Methods, goals, objectives and value of the course. Specificity and mechanism of economic laws effect in healthcare sector.

**Be able.** To interpret economics of public health and her main category. To determinete the economic content of relations in the healthcare sector. To know economic laws.

**The main questions to study:**

1. History of the origin and development of the economics.

2. Healthcare economics as a science and a subject.

3. The main tasks and the main methods of health economics.

4. Main economic laws.

**Control questions:**

1. History of appearing and becoming of economic science.

2. Economic as science and subject for training.

3. What component part is distinguished in an economic theory and what part economic of public health refer to.

4. Levels of economics.

5. What is economic of public health and what its main purposes.

6. Main tasks and methods of economic of public health.

7. Main economic laws and it`s classification.

8. What essence of economic laws is? The law of supply and demand and law of value.

**Tasks for solution (discussion)**

1. To explain the place of economics in the life of modern man.

2. Give examples: when you enter into economic relations.

3. Give examples: how economic laws operate (from your own experience or the history of the country).

4. Give examples of economic relations at different levels of the economy.

5. Is the healthcare economics identical to other economies? Or do they have differences? What and why?

6. Explain by example the essence of the fundamental / basic issues of the economy.

**For notes**

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**Date of the performing the work** \_\_\_\_\_\_\_\_\_\_\_\_ **Signature of the teacher** \_\_\_\_\_\_\_\_

**TOPIC № 2**

**PUBLIC HEALTH AS AN ECONOMIC AND SOCIAL CATEGORY**

**Purpose of the class.** To study the essence of public health as an economic and social category, the basic system of financing the health sector in the world.

**Know.** Public health and healthcare as an economic and social category. Values of population health for the country, its economy and national security. Basic healthcare system. The modern concept of healthcare system reform. The strategy of healthcare development.

**Be able.** To interpret health and healthcare as an economic category. To evaluate models of the health care system, their advantages and disadvantages, the possibility of using it in the conditions of our country.

**The main questions to study:**

1. Public health – as a biological, physiological, economic, social and psychological category.

2. The level and quality of life of the population, a healthy lifestyle.

3.Models of public health systems and their description.

4. The current state of the health care system in Ukraine and ways of reforming.

**Control questions:**

1. “Public health” as biological and social category.

2. “Public health” as economic category.

3. “public health” as consumer of economic resources.

4. interdependence of population health level and “life level and quality life”.

5. Public health basic systems and their role in provision medicare of population.

6. Public health state system. It`s advantages and lacs.

7. Public health insurance system. It`s advantages and lacs

8. Private public health system. It`s advantages and lacs.

9. Multi – structural healthcare system, multi – channel financing mechanism.

10. Organizational principles of public health market relations.

**Tasks for solution (discussion)**

1. Using examples to describe the health of the population as an economic category.

2. Explain the importance of public health for the country, its economy, further development and national security.

3. Illustrate by examples the essence and differences of the concepts "standard of living" and "quality of life".

4. What is the significance of a healthy lifestyle for the health of the population and for the country's economy? What are the conditions and reasons that prompt management to encourage the spread of a healthy lifestyle among the population? Develop proposals to promote a healthy lifestyle in modern conditions.

5. What is the role of the doctor as a specialist in the promotion of a healthy lifestyle?

6. What are the advantages and disadvantages of basic health care models? On the basis of which model is the healthcare system of Ukraine built? Do you consider it to be the most contemporary one and why?

**For notes**

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**Date of the performing the work** \_\_\_\_\_\_\_\_\_\_\_\_ **Signature of the teacher** \_\_\_\_\_\_\_\_

**TOPIC № 3**

**PLANNING AND PREDICTION IN HEALTHCARE SYSTEM**

**Purpose of the class.** To study planning and forecasting bases in the system of health protection.

**To know**. The essence of planning and forecasting and their importance for the activities of the industry and a separate organization. Essence of functions and planning methodology of public health system. Kinds and planning methods. Study of volumes of medicare and sanitary epidemiological providing. Strategic plan of medical establishment, his description and task. Contents and connection strategic and operative plans of medical and preventive establishments. The system of the operatively – calendar planning is in the system of health protection. Methods of planning of quantity of medical personnel.

**Be able.** To apply the methods of planning in healthcare system (strategic, operational, policy, indicative, contract, business) and plan the number of medical staff, to develop strategic and operational plans for health institutions.

**The main questions to study:**

1. The essence of planning and forecasting, their role and tasks.

2. Planning in health care.

3. Types of planning.

4. Methods of planning in the health care system.

5. Planning of the activity of public health system at the state level.

6. Planning the network of medical institutions.

7. The method of planning outpatient care.

8. Method of planning hospital (inpatient) medical care.

**To help with independent work**

**1. Calculation of medical office function.**

To plan annual scope of work for a doctor receiving patients in hospital and delivering medical treatment at home, we shall calculate the **rate of medical office function**. Medical office function is defined by the number of planned appointments of all kinds (Clinic + occupational health examination + home attendance) to be held by a medical office within one calendar year. Medical office function (F) is calculated by Rosenfeld formula

$$F=G×C×B$$

where:

G – annual number of working days;

С – number of work hours during reception + on prophylactic examination + visits at home(work day value) ;

B – number of accepted patients per 1 hour (hour norm loading).

Calculation of a **planned (projected) value** of medical office function (FPL) and **actual medical office function** (Fact) according to specialities.

**Planned (projected) value** of medical office function is calculated according to specialties as a load of a doctor per 1 working hour.

***Medical office function consists of 3th elements:***

1 – st element (B) – doctor loading norm per 1 hour in polyclinic and 1 hour at home(service norm).

2 – d (C) – number of work hours on reception, on prophylactic examination and at home.

3 – d (G) – annual number of working days (278days if 6.5 hours working day).

**Example**:

Calculations of planned medical office functionfor therapist at the ambulatory reception:

F =5 men \* 3 hour \* 278 working days = 4170 visits

where:

5 men – hour loading norm;

3 hour – polyclinic reception time;

278days – annual working days;

Calculations of planned medical office functionfor therapist at home**:**

F **=** 2 men \* 3,0 hour \* 278 = 1668 receptions

where:

2 men – hour loading norm at home service;

3,0 hour – number of hours at home service.

Total calculations of planned medical office functionfor therapist at polyclinic:

Sum: 4170 + 1668 = 5838 annual visits.

If 9 doctors work at therapist department that general (planned) load is 5838 \* 9 = 52542 receptions.

*According to TPE report`s material* doctor staff actual function (Fact) calculated (by specialties ):

$$F\_{act}=\frac{number of visits at reception+ number of visits at home}{number of occupation staff}$$

Planned medical office function is compared to actual medical office function (load) for proper arrangement of activities and planning.

Planned medical office function is used for scheduling medical offices, both in general and in certain specialties. You can use the following formula:

**2. Calculations of need for doctor staff.**

$$B=\frac{L×N}{F}$$

where:

B– number of doctor staff;

L– annual visits norm(planned value) for one habitant;

N– number of population;

F – medical office function (actual and norm).

**Example:** Need for doctor staff for polyclinic which services 100th. population.

В = 3,4 receptions \* 100000 population : 6100 visits = 55.7 posts.

**3. Outpatient aid planned method.**

**Planned of medical aid volume in polyclinic.**

(number of visits for 1000th. population) :

|  |  |  |
| --- | --- | --- |
| **P** | **=** | **А + Cn + D + P1** |

where:

P– number of doctor visits;

А – sick rate for1000 th. population;

C**n**–repeat receptions coefficient;

D– number of dyspensery visits;

P1 – number of prophylactic visits.

**Need for doctor staff** **in polyclinic.**

|  |  |  |
| --- | --- | --- |
| **N** | **=** | **(B1\*V1\*R)+(B 2 \* V2\* R)** |

where:

B1, B 2 – reception load norm per one hour in polyclinic;

V1, V2 – schedule working time during reception in polyclinic and at home;

R – number of prophylactic visits.

**4. Inpatient aid planned method.**

**Planned of bed number in hospital:**

(According to hospitalization rate for 1000 population)

$$N=A×\frac{R}{100\%}×\frac{P}{D}$$

where:

N – annual bed number (1000 men);

А – sick rate for1000th. population;

R –percent of hospitalization;

Р – average time of patients` stay on bed;

D– annual average time of bed occupation.

**Planned of medical office in hospital** (on bed number)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Nк | = | Nб | + | 365 |
| R |

where:

Nк – bed number for 1 post;

Nб –number of patients under service for 1 post;

R – planned working days of the bed in a year.

**EXAMPLES**

**to calculate population needs in outpatient and hospital care**

Joint municipal hospital covers an area with a population of 53,000 people. Birth rate in this area is 12 children per 1,000. Staff schedule of therapeutic department is 9 people, occupied offices – 8 people. The number of visits to outpatient reception is 36256 visits per year, at home – 16104 visits. The number of working days in a year is 281 days. Doctor's load per 1 hour of reception at polyclinic (P) is 5 people, 2 people at home. Doctor's working day constitutes 6.5 hours, including reception at polyclinic – 3 hours, at home – 3 hours and 0.5 hours for documentation and promotion of healthy lifestyle among the population. Projected percentage of referral to inpatient treatment (selection for the bed) – 2%. Average duration of hospital stay in maternity department – 15 days. Average annual occupancy rate of department department – 300 days.

Task:

1. Calculate planned medical office function (F) for a physician.

2. Calculateactual medical office function (Fact) for a physician.

3. Calculate the need for medical offices of physicians for outpatient clinics in a district with a population of 53,000 people.

4. Define population's need for hospital care (for example, obstetric and gynecological department of a multi – field hospital).

5. Draw conclusions.

**Decision:**

**1** **Calculations of** **planned medical office** **function (F)** **of therapist.**

Fpl on outpatient reception:

Fpl outp = B\* С \* G= 3 \* 5 \* 281 = 4215 visits.

Fpl home = B\* С \* G= 3 \* 2 \* 281 = 1686 visits.

Total:

Fpl gen = Fpl outp + Fpl hom = 4215 + 1686 = 5901 visits.

If in therapist department 9 doctor posts that general (planned) load is

 5901 \* 9 = 53109 visits.

**2. Calculations of doctor therapist post (F) actual function:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **F=** | Number of visits on reception. | + | Number of visits at home |
| Number of occupation staff |

$$F=\frac{36256+16104}{8}=6545 visits$$

**3. Calculations of need for doctor staff for outpatient institution:**

Planned medical office function of therapist5901, annual reception norm for 1 habitant in therapy– 2.

|  |  |  |
| --- | --- | --- |
| **В** | **=** | **L \* N : F** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **В** | **=** | **2 \* 53000 : 5901** | **=** | **18posts**  |

**4. Calculations of need of population for obstetric – gynecologycal aid for inpatient institution.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| K | = | А \* | Р \* | R |
| D х 100 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| K | = | 12 \* | 100 \* | 15 | = | 0,6 |
| 300 х 100 |

**Conclusion:** Joint municipal hospital (outpatient department) doctor post (F) planning function is 5901 receptions, doctor post actual function is 6545 receptions. Need of population for therapist posts for outpatient institution is 18 posts,need of population for inpatient obstetric – gynecologycal aid is 0,6.

**INDIVIDUAL TASK**

Average population of the area served by multi – field municipal hospital is 91,000 people

Duration of physician's \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (name) working day is: for pediatricians – 6.5 hours, including reception of patients at clinic – 3.5 hours, at home – 3 hours. For obstetricians and gynecologists, surgeons, neurologists and ophthalmologists – 6.0 hours, including 4 hours to receive patients at clinic and 2 hours to attend patients at home

**Task:**

Using working book annexes № 1–2:

**1.** Calculatе planned medical office function(Fpl)**.**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**2.** Сalculate medical officeactual function ( Fact)***.*** \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**3.** Сalculate need for doctor staff \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for outpatient institution which covers an area with a population of 91000.

**4.** Сalculate need for inpatient aid (on example \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ofmultidisciplinary hospital department).

**5.** Draw conclusions.

**Decision:**

1. C**alculation of planned medical office function(Fpl).(appendix 1).**

Fpl on outpatient reception:

Fpl outp = B\* С \* G = \_\_\_\_\_\_ \* \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ receptions.

Fpl home = B \* С \* G = \_\_\_\_\_\_ \* \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ receptions

Total:

Fpl gen= Fpl outp + Fpl home= \_\_\_\_\_\_ + \_\_\_\_\_\_ = \_\_\_\_\_\_ receptions.

With account of posts number in \_\_\_\_\_\_\_\_\_\_\_\_ department general planned load is \_\_\_\_\_\_ \*\_\_\_\_\_\_ = \_\_\_\_\_\_ receptions.

**2. Сalculate medical office actual function( Fact)*.***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Fact** | = |  Number of visits on receptions \_\_\_\_\_\_\_\_ | + | Number of visits at home.\_\_\_\_\_\_\_\_ | = | visits |
| Number of occupation staff \_\_\_\_\_\_\_\_ |

**3.** Сalculation need for doctor staff **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**profile for outpatient institutionwhich covers an area with a population of 91000**.**

Мedical office function \_\_\_\_\_\_\_\_, reception norm for 1 habitant in a year \_\_\_\_\_\_\_\_.

В = L \* N: F = \_\_\_\_\_\_\_\_ \* \_\_\_\_\_\_\_\_ : \_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_ posts.

**4.** Calculate **need for the beds** for **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** multidisciplinary hospital department **(**annex 2**).**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Nb | = | А \* | Р \* | R  |
| D х 100 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Nb | = | \_\_\_\_ \* | \_\_\_\_ \* | \_\_\_\_ | = | \_\_\_\_\_\_\_\_\_ |
| \_\_\_ х 100 |

Number of beds required, taking into account the number of population:

$TN=Nb\* $N = \_\_\_\_\_\_\_ \* \_\_\_\_\_\_\_\_= \_\_\_\_\_ beds

**Сonclusions:**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Control questions:**

1. Content and meaning of planning in public health.

2. What parts plan in field of public health consists of?

3. What are stages of planning?

4. What must be reflected in plans?

5. What is the purpose of planning in public health?

6. What are types of planning?

7. What are types of planning by time and direction of activity?

8. What are types of planning by effect character on object of management?

9. What are types of planning by activity of management and by it`s level?

10. What plan is by characteristic?

11. What are the basic principles in public health?

12. What are methods of planning?

13. What is the definition of normative method?

14. What is the definition of balancing method?

15. What is the definition of analytic method?

16. What is the definition of comparative method?

17. What is the definition of estimation?

18. What is the definition of strategic planning?

19. What public health strategic planning includes in itself?

20. What strategic planning of activity of medical institution’s and enterprises includes in itself ?

21. What is the definition that related to functional plans?

22.Рlanning of volume of medical aid.

23.Рlanning of staff

24.Рlanning of entrepreneurial activity.

**Tasks for solution (discussion)**

1. Explain the difference between the concepts of "planning" and "forecasting", if it exists.

2. What is the role of planning in the life of an ordinary person, the activities of the organization, the functioning of the industry?

3. Illustrate the planning process in stages by example.

4. Explain the differences and the importance of planning by time and types of goals. What consequences for the organization can be when ignoring certain types of these plans?

5. Explain the nature and necessity of planning principles in health care.

6. What is the importance of planning the network of medical institutions and the volume of medical care in modern conditions?

**For notes**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Date of the performing the work** \_\_\_\_\_\_\_\_\_\_\_\_ **Signature of the teacher** \_\_\_\_\_\_\_\_

**TOPIC № 4**

**BUSINESS PLANNING. A METHODOLOGY FOR DRAWING UP A BUSINESS PLAN FOR THE ORGANIZATION OF ENTREPRENEURSHIP IN HEALTH CARE**

**Purpose of the class.** To study the essence of business planning and the basis of the methodology for drawing up a business plan as an instrument for regulating business activity.

**Know**. The essence of business activity and its characteristics in health care. Legal basis of business in healthcare. Organizational and legal forms of business. Business plan as a tool for business regulation. The procedure for drafting a business plan. Requirements for the business plan.

**Be able**. Formulate entrepreneurial idea, evaluate the possibility of its implementation. Work with legal documents that determine the basics of entrepreneurial activities in the health sector. Make a business plan to ensure the development of a medical and preventive institution.

**The main questions to study:**

1. Entrepreneurship in health care

2. The essence of business planning as a tool for the development of entrepreneurial activities.

3. The procedure for drafting a business plan, its content.

4. Requirements for the business plan.

**Control questions:**

1. Identify the essence of entrepreneurial activity.

2. Features of entrepreneurship in the health sector.

3. Legal basis for business in health.

4. What is a business plan, how and with what specific purposes it is created.

5. The content and structure of the business plan.

6. What methods of economic analysis used in the development of a business plan.

7.What types of risks can arise up during realization of business.

8. Requirements for the business plan.

**Tasks for solution (discussion)**

1. Identify the place of entrepreneurship in the modern economy of Ukraine and in the healthcare sector.

2. Uncover the specifics of entrepreneurship in the healthcare sector.

3. Compare the conditions for the functioning of business entities in the healthcare sector and in other areas of the economy.

4. In which cases it is advisable to draw up a business plan.

5. Are there strict requirements for the content and scope of the business plan?

6. In what spheres and under what conditions is business planning applicable?

7. Which of the sections of the business plan is designed to first of all interest the potential investor?

**Situational tasks**

How will you act in the following situations?

1. You will have an entrepreneurial idea to create a small business in the field of healthcare?

2. Local authorities did not give permission for state registration of entrepreneurial activities.

3. You have decided to open a small own business in the healthcare sector.

4. Your leadership is considering the possibility of expanding your business.

5. The profitability of your enterprise is constantly decreasing over several years.

6. You want to expand the activities of your business (new specialists, services), but you do not have enough funds for this.

**For notes**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_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**Date of the performing the work** \_\_\_\_\_\_\_\_\_\_\_\_ **Signature of the teacher** \_\_\_\_\_\_\_\_

**TOPIC № 5**

**FINANCIAL PLANNING BASICS IN HEALTHCARE ESTABLISHMENTS**

**Purpose of the class**. To introduce students to healthcare financing in Ukraine, sources of funds aimed at healthcare, preparation and implementation of hospital estimates.

**Know**. Functions and methods of healthcare financing in Ukraine. Types and methods of financing. Volume of financing. System of healthcare industry financing. Financing methods. Healthcare facility estimates. Key financial health system model. Main features of health system models. Budget, mechanism of its development.

**Be able**. To apply methods of healthcare financing. To plan and to develop estimate for a medical facility. Budgeting mechanisms in medical facilities.

**The main questions to study:**

1. Financial environment and resources in the healthcare sector.

2. Sources of financing for the industry.

3. Methods of financing the industry.

4. Foreign experience in financing health care.

5. Financial planning of the state. Budget.

6. Features of budgetary financing and planning of the estimate of a medical institution.

**To help with independent work**

**Sample calculation of estimate items for a central district hospital.**

Planned (performance) rates of a central district hospital: capacity - 250 beds, including therapeutic - 60, surgical - 50, pediatric - 40, obstetrical – 30, other profiles - 70. Average annual occupancy rate for maternity department is 300 days, other departments - 340. Daily nutrition costs per patient: maternity department - 15 UAH., pediatric department - 14 UAH., other departments - 12 UAH. Costs for medicines and bandage materials in a hospital bed for one day amounted to UAH 7. CDR has 324 employees, including doctors – 69, nursing staff – 124, paramedical staff – 72, others - 59. Average monthly wage for doctors - 1250 UAH, nursing staff - 900 UAH, paramedical staff - 700 UAH., others - 800.

Calculate expenditures for items 1, 2, 3, 9, 10 and their share in the budget, for remaining items (4, 5, 12, 14, 16, 18) calculate their total (their total weight).

Total expenditures of the hospital (budget) makes. – 8250000 hrn.

***Algorithm.***

**1. Сalculations of charges on the items:**

Item 1 (Wages) calculated using the direct calculation, that is, the average wages of employees in each category is multiplied by the number and by 12 (months).

a) wage of doctors :

1250 hrn. \* 69 doctors \*12 months = 1035000 hrn.

b) wage of middle medical personnel :

900 hrn. \* 124 workers \*12 months = 1339200 hrn.

c) wage of junior medical personnel :

700 hrn. \* 72 workers \* 12 months = 604800 hrn.

g) wage of other personnel :

800 hrn. \* 59 worker \* 12 months = 566400 hrn.

Thus, charges of TPE on the 1item make 3545400 hrn., and specific gravity of the Item 1 in the budget of establishment equal:

Specific gravity of the 1 Item =42,97%

Item 2 (extra charges on wages) - in in accordance with operating legislation make 37% extra charges on a wage, that is:

Item 2 =  = 1311798 hrn.

Specific gravity of this Item2 =  = 15,9%

Item 3 (office and economic charges) settle accounts coming from the set norms of charges - approximately 10% from a total budget.

Specific gravity of the Item 3 =  = 10,0%

Items 4 and 5: Expect by a ground (corresponding documents are added).

Item 9 (charges on a feed): settle accounts on norms, so. the cost of feed of one patient in a day is multiplied by the amount of planning bed days.

а) in a maternity separation:

15 hrn. \* 30 beds \*300days = 135000 hrn.

б) in a pediatric separation:

14 hrn. \* 40bedsкоек \* 340days = 190400 hrn.s.

в) in other separations:

12 hrn.s \* (60+50+70) beds \*340days= 734400 hrn.

Total 135000+190400+734400 = 1059800 hrn.

Specific gravity of charges on a feed in a budget makes:  = 12,85%

Item10 (charges on medications and bandaging facilities):

Settles accounts on norms, i.e. the cost of charges on one bed day is multiplied by the amount of bed days.

а) in a maternity separation

7hrn. \* 30 beds \* 300 days = 63000 hrn.

в) in other separations:

7hrn. \* (60+50+40+70) beds\*340 days = 523600 hrn.

Total 63000 + 523600 = 586600 hrn.

Specific gravity of the Item 10 is  = 7,11%

Total expense on theitems 1, 2, 3, 9, 10:

3545400 + 1311798 + 825000 + 1059800 + 586600 = 7393598 hrn.

Expense on theitems 4, 5, 12, 14, 16, 18 settle accounts as a difference between a budget and calculated items.

8250000 - 7393598 = 856402 hrn.s, that in a budget makes: % = 910,4%

The data obtained as a result of the conducted calculations on the items of expenses are added to the table.

**Charges on the principal items of estimate of central district hospital.**

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Name of basic Items(structures) of TPE | charged extra(.hrn.) |  (%)Specific gravity  |
| 1 | Wages  | 3545400 | 42,97 |
| 2 | Charges on wages  | 1311798 | 15,9 |
| 3 | Office and business expenses  | 825000 | 10,0 |
| 9 | Nutrition | 1059800 | 12,85 |
| 10 | Purchase of medicines and bandaging materials  | 586600 | 7,11 |
| Expense on othersitems (items4, 5, 12, 14, 16, 18) | 757402 | 10,4 |
| Total  | 8250000 | 100 |

**Conclusion.** .In accordance with planned indexes of central district hospital charges on the items of estimate correspond to the normative indexes, what activity of this medical and preventive establishment will allow to provide up-to-the-mark.

**Independent work**

On the basis of given in the annex 3-5 data to calculate:

1. Charges on the items 1, 2, 3, 9, 10 taking into account their norms (look the algorithm of decision of task).

2. Totally charges on the items 4, 5, 12, 14, 16, 18 (as a difference between establishment budget and the sum of charges on the articles 1, 2, 3, 9, 10).

3. Specific gravity of items is in a general budget

4. To add the obtained data to the table (see a table.)

5. To analyze the obtained data.

Note: Budget of medical and preventive establishment of the variant s accounts on specific gravity of the first item. Example: the item 1(wage) settles accounts the method of direct account (see the algorithm of calculation of salary). For example: 3500000, and its specific gravity in a budget is 54.0%. From here the budget of TPE will be equal to 3500000: 54 х 100 = 648148 hrn.

**Decision:**

**1. Calculate charges on the item:**

Item 1(wage):

a) wage of doctors :

\_\_\_\_\_\_ hrn. \* \_\_\_\_\_\_ doctors \*12 months = \_\_\_\_\_\_\_\_ of hrn.

b) wage of middle medical personnel :

\_\_\_\_\_\_ hrn. \*\_\_\_\_\_\_ worker \* 12 months = \_\_\_\_\_\_\_\_ of hrn.

c) wage of junior medical personnel :

\_\_\_\_\_\_ hrn. ? \_\_\_\_\_\_ worker? 12 months = \_\_\_\_\_\_\_\_ of hrn..

d) wages of other personnel

\_\_\_\_\_hrn. \*\_\_\_\_\_\_ \*worker\* 12 months = \_\_\_\_\_\_\_\_ of hrn.

Thus, charges of TPE on the item 1 make

\_\_\_\_\_\_\_\_.hrn + \_\_\_\_\_\_\_\_ hrn. + \_\_\_\_\_\_\_\_ .hrn + \_\_\_\_\_\_\_\_ .hrn = \_\_\_\_\_\_\_\_ of hrn.

Specific gravity of the item 1 in the budget of establishment :

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| = |  |  | \*100% | = | \_\_\_\_\_\_\_\_\_\_% |
|  |

Item 2 (extra charges on a wages ) - in an accordance whith operating legislation make 37% extra charges on a wage, thus

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  | \*37% | = | \_\_\_\_\_\_\_\_hrn. |
| 100% |

Specific gravity of this 2 Item

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  | \*100% | = | \_\_\_\_\_\_\_\_\_\_% |
|  |

Item 3 (office and economic charges) settle accounts coming from the set norms of charges - approximately 10% from a budget.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  | \*10% | = | \_\_\_\_\_\_\_\_\_\_ hrn. |
| 100% |

Item 9 (charges on a feed): settle accounts on norms, thus, the cost of feed of one patient in a day is multiplied by the amount of planning bed days.

а) in a maternity separation

\_\_\_\_\_\_.hrn. \*\_\_\_\_\_\_ beds \*\_\_\_\_\_days = \_\_\_\_\_\_ hrn.

b) in a pediatric separation

\_\_\_\_\_\_ hrn. \* \_\_\_\_\_\_ beds \* \_\_\_\_\_ days = \_\_\_\_\_\_ hrn.

c) in other separations

\_\_\_\_\_\_. hrn. \* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_beds\*\_\_\_\_\_ days = \_\_\_\_\_\_hrn.

Total:

\_\_\_\_\_\_\_\_ hrn . + \_\_\_\_\_\_\_\_.hrn. + \_\_\_\_\_\_\_\_ .hrn. = \_\_\_\_\_\_\_\_ hrn.

Specific gravity of the item 9 in the budget of establishment :

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  | \*100% | = | \_\_\_\_\_\_\_\_\_\_% |
|  |

Item 10 (charges on medications and bandaging facilities)

Settles accounts on norms, i.e. the cost of charges on one bed day is multiplied by the amount of bed days

а) in a maternity separation

\_\_\_\_\_\_ hrn. \*\_\_\_\_\_\_ beds \*\_\_\_\_\_ days = \_\_\_\_\_\_hrn.

b) in other separations

\_\_\_\_\_\_ hrn. (\_\_\_\_\_\_ + \_\_\_\_\_\_ + \_\_\_\_\_\_ + \_\_\_\_\_\_) beds \*\_\_\_\_\_days = \_\_\_\_\_\_.hrn.

Total

\_\_\_\_\_\_\_\_ hrn. + \_\_\_\_\_\_\_\_ hrn. = \_\_\_\_\_\_\_\_ hrn. .

Specific gravity of the item 10 in the budget of establishment :

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  | \*100% | = | \_\_\_\_\_\_\_\_\_\_% |
|  |

Total expense on theitems 1, 2, 3, 9, 10:

\_\_\_\_\_\_\_.hrn. + \_\_\_\_\_\_\_. hrn.+ \_\_\_\_\_\_\_hrn.+ \_\_\_\_\_\_\_ hrn.+ \_\_\_\_\_\_\_ hrn. = \_\_\_\_\_\_\_hrn.

Expense on the items 4, 5, 12, 14, 16, 18 settle accounts as a difference between a budget and calculated item:

\_\_\_\_\_\_\_\_ hrn. – \_\_\_\_\_\_\_\_.hrn. = \_\_\_\_\_\_\_\_ hrn.

Specific gravity of the item 4, 5, 12, 14, 16, 18 in the budget of establishment :

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  | \*100% | = | \_\_\_\_\_\_\_\_% |
|  |

The data obtained as a result of the conducted calculations on the items of expenses add to the table.

**Charges on the principal items of estimate of central district hospital/**

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Name of basic Items(structures) of TPE | extra(hrn.s) | (%) Specific gravity  |
| 1 | Wages  |  |  |
| 2 | Charges on wages  |  |  |
| 3 | Office and business expenses  |  |  |
| 9 | Nutrition |  |  |
| 10 | Purchase of medicines and bandaging materials  |  |  |
| Expense on others items (itemsстатьи 4, 5, 12, 14, 16, 18) |  |  |
| Total  |  |  |

**Conclusions: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Control questions:**

1. Financial resources in health care.

2. Contents and value of financial management in public health.

3. Sourcing of financing of industry**.**

4. Basic financial models of public health.

5. Basic features of models of public health.

6. Budget, mechanism of its drafting.

7. Financial planning of medical establishment (estimate).

8. Drafting of estimate is in establishments of public health. Order of calculation of basic items of estimate(1, 2, 9, 10).

**Tasks for solution (discussion)**

1. Describe the financial environment of health institutions.

2. What are the main sources of financing in the healthcare sector? Are they different for organizations of different forms of ownership and activities?

3. Identify the specifics of financing health care institutions in Ukraine.

4. Compare the three methods of financing healthcare.

5. Describe alternative methods of financing health facilities.

6. Tell us about modern ways of financing medical institutions.

7. Identify the advantages and disadvantages of the current system of financing the activities of medical institutions.

8. Do you know of any alternative systems for financing the activities of health facilities, what are their characteristics and are they applicable in our conditions?

9. Determine the relationship between the country's budget and the estimate of health facility.

10. Describe the procedure for the formation and approval of the State budget.

**For notes**

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**Date of the performing the work** \_\_\_\_\_\_\_\_\_\_\_\_ **Signature of the teacher** \_\_\_\_\_\_\_\_

**TOPIC № 6**

**METHODS OF PAYMENT FOR MEDICAL STAFF**

**Purpose of the class.** To study existing forms and methods of labour remuneration, as well as their application in the field of health care

**Know**. The essence of mechanisms of remuneration for health care providers. Payment of outpatient and inpatient care, its comparative characteristics. Essence, types, forms and mechanisms of stimulating medical staff. Methods of calculating wages for medical workers.

**Be able.** To calculate wages for medical staff. Use and analyse various forms and systems of labour remuneration, evaluate their effectiveness in terms of performing basic functions of labour remuneration.

**The main questions to study:**

1. The essence and functions of remuneration in modern economic conditions.

2. Forms and systems of labour remuneration.

3. World experience of stimulating labour by means of its payment.

4. Traditional forms and systems of salary of medical workers.

5. Multi-factor system of remuneration of medical workers in market conditions.

6. The current situation in the sphere of remuneration of medical workers.

**To help with independent work**

**Methods of calculating extra payments considering labour participation rate.**

**Sample case study.**

Medical ward employs 4 doctors (chief of department – 1, senior registrar – 1, resident – 2), 9 nurses, one of them is a head nurse, 4 ward attendants. According to the results by month material incentive fund allocated UAH 4000. Determine the allowance to basic salary of health workers and draw conclusions.

**Algorithm.**

**Stage 1** – distribute material rewards between categories of employees basing on the contribution of each of these categories in health process. According to work complexity doctor’s work is conditionally accepted for 3 units, nurse’s – for 2, ward attendant’s – for 1 (by ranking method).

**1.1. Define the amount of units for every category of workers : total**

doctors: 3 un. х 4 doctors = of 12 un

nurses: 2 un. х х 9 m/ss = of 18 un.

junior nurses: 1 un. х of 4jn. = 4 un.

**1.2. Define the amount of units on all working:**

12 + 18 + 4 = 34 un.

**1.3. Define the cost of one conditional unit :**

An amount of the facilities on encouragement is a common amount of units of LPC=of a 4000/34=117.65 hrn.

**1.4. Define the total amount of moneys being on every category of workers taking into account complication of their work**

doctors: 117.65 х 12 = 1411.8 hrn.

nurses: 117.65 х 18 = 2117.6 hrn.

junior nurses: 117.65 х 4 = 470.6 hrn.

Coefficient of labour activity (**CLA)** present in table 1

**2 the stage** – we distribute money encouragement into every category of workers taking into account the deposit of every worker, using the coefficients of labour participation.

The coefficients of labour participation for a previous month are presented in a table 1.

*Table 1*

**Distribution of categories of workers on the coefficients of labour participation**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Categories of employees of separation and size of LPC | Head of department | senior doctor – intern  | Interns | head nurse | nurses | junior nurses |
| Number of staff | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| Coefficient of labour activity (**CLA)** | 1,0 | 0,9 | 0,8 | 1,0 | 0,9 | 0,8 | 0,7 | 0,6 | 0,9 | 0,8 |

**2.1. Define the amount of CLA on every category of personnel:**

doctors:(11,0) + (10,9) + (20,8) = 3,5

nurses:(11,0) + (2 0,9) + (2 0,8) + (2 0,7) + (2 0,6) = 7,0

junior nurses:(20,9) + (20,8) =3,4.

**2.2. Define the cost of a 1 unit of CLA of participation on every category of personnel:**

|  |  |  |  |
| --- | --- | --- | --- |
| One unit of CLA | = | amount of money on encouragement of this category of personnel |  |
| total amount of CLA of this category of personnel |

doctors: 1411.8 : 3,5 = 403.37 hrn.

nurses: 2117.6 : 7,0 = 302.51 hrn.

junior nurses: 470.6 : 3,4 = 138.41 hrn.

**2.3. Define the raise to the post wage of every category of workers depending on** **CLA** (the cost of one unit of **CLA** of this category of personnel is multiplied by a value **CLA** concrete worker:

**Size of raises to the post wages of concrete workers**

Head of department= 403.37 \* 1,0 = 403.37 hrn.

senior doctor – intern = 403.37 \* 0,9 = 363.03 hrn.

doctor – intern = 403.37 \* 0,8 = 322.70 hrn.

head nurses= 302.51 \* 1,0 = 302.51 hrn.

nurse “A’’ = 302.51 \* 0,9 = 272.26 hrn.

nurse ‘’B’’ = 302.51 \* 0,8 = 242.01 hrn.

nurse “С“ = 302.51 \*0,7= 211.76 hrn.

nurse ‘’D’’ = 302.51 \* 0,6 = 181.51 hrn.

a junior nurse “A’’ = 138.41 \*0,9= 124.57 hrn.

a junior nurse ‘’B’’ = 138.41 \* 0,8 = 110.73 hrn.

**Conclusion**. A raise to the post wage depends on an amount and quality of labour and personal deposit of every worker, i.e. depends on **CLA**

**INDEPENDENT WORK**

Initial data are presented in annex 6; taking into account complication – work of doctor must be taken for 3 units, nurse – for 2 units, junior nurses – for a 1 unit.

To define the size of raise to the post wage on the size of **CLA** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of separation (look the algorithm of decision of situational task), to draw conclusion.

**1. Define the** **mount of units for every category of workers**

doctors: \_\_\_\_\_\_ un. х \_\_\_\_\_\_ doctors = \_\_\_\_\_\_ un.

nurses: \_\_\_\_\_\_.un. х \_\_\_\_\_\_ n = \_\_\_\_\_\_un..

junior nurses: \_\_\_\_\_\_ un.. х \_\_\_\_\_\_.j n= \_\_\_\_\_\_un.

**1.2. Define the** **amount of units on all workers:**

\_\_\_\_\_\_ + \_\_\_\_\_\_ + \_\_\_\_\_\_ = \_\_\_\_\_\_ un.

**1.3. Define the** **cost of one conditional unit**

\_\_\_\_\_\_ / \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

**1.4. Define the** **amount of moneys being on every category of workers taking into account complication of their work:**

doctors: \_\_\_\_\_\_ х \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

nurses: \_\_\_\_\_\_ х \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

nurses: \_\_\_\_\_\_ х \_\_\_\_\_\_ = \_\_\_\_\_\_hrn.

2 stage – we distribute money encouragement in every category of workers taking into account the deposit of every worker, using the coefficients of labour participation.

**2.1. Define the total amount of CLA on every category of personnel:**

doctors: (\_\_\_\_\_\_) + (\_\_\_\_\_\_) + (\_\_\_\_\_\_) + (\_\_\_\_\_\_) = \_\_\_\_\_\_

nurses: (\_\_\_\_\_\_) + (\_\_\_\_\_\_) + (\_\_\_\_\_\_) + (\_\_\_\_\_\_)= \_\_\_\_\_\_

junior nurses: (\_\_\_\_\_\_) + (\_\_\_\_\_\_) + (\_\_\_\_\_\_) + (\_\_\_\_\_\_) = \_\_\_\_\_\_

**2.2. Define the price of one unit of the CLA participation in each category of staff:**

|  |  |  |  |
| --- | --- | --- | --- |
| One unit of CLA doctors  | = |  |  = \_\_\_\_\_\_\_\_\_\_ hrn. |
|  |

|  |  |  |  |
| --- | --- | --- | --- |
| One unit of CLA nurses | = |  |  = \_\_\_\_\_\_\_\_\_\_ hrn. |
|  |

|  |  |  |  |
| --- | --- | --- | --- |
| One unit of CLA junior medical workers | = |  |  = \_\_\_\_\_\_\_\_\_\_ hrn. |
|  |

**2.3. Define the** **raises to the post wages of every workers** **category based on the** **CLA. Size of the** **raises to the post wages of every workers** **category.**

Head of department = \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

Senior doctor – intern = \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

doctor – intern = \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

doctor – intern = \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

Head nurses = \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

nurse “A” = \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

nurse “B”= \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

nurse “C” = \_\_\_\_\_\_\* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

junior nurses “A” = \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

junior nurses “B” = \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

junior nurses “C” = \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

junior nurses “D” = \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

**Conclusion**.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Control questions:**

1. What is the definition of wage.

2. Function of wages.

3. Forms and systems of payment of medical workers.

4. What are the principles of formation of payment for medical workers.

5. Types of wages.

6. What are the principles of formation of wage for medical workers.

7. What is the main and additional wage.

8. What is nominal and real wages.

9. What are the main causes imperfect payment of medical workers.

10. Norm and rationing in remuneration.

11. The main problems of labour remuneration in the healthcare sphere, their impact on the quality of medical care for the population

**Tasks for solution (discussion)**

1. Explain the difference between staff and workforce.

2. What are the classification characteristics in the analysis of personnel you can name? What is the reason for their selection?

3. Explain the essence of labour incentive with the help of its payment.

4. How do you assess the effectiveness of material and non-material methods of motivation of work. Justify your answer.

5. Expand the essence of wages and its functions in a market economy.

6. Identify the features and problems of labour remuneration in the healthcare sector.

7. Compare the hourly and piece-rate wage.

8. Explain the meaning of additional payments and surcharges to wages, bonuses to staff.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Situational tasks**

What will you do in the following situations? Why?

1. You work as a head of a private medical institution and, as a result of monitoring the labour market, find out that the salary in your institution:

- is below the average market for private medical services;

- is above the average market for private medical services.

2. As a result of the work, you have a small premium fund (approximately 3000 UAH per 10 employees) and you are the manager:

- in a private medical institution;

- in the state medical institution.

3. You get the opportunity, at your discretion, to create a system of material incentives for employees.

4. A subordinate comes to you with a request to raise wages:

- in a private medical institution;

- in the state medical institution.

5. You work in a certain medical institution, in which you are satisfied (duties, schedule, collective and relations in it, leadership style, territorial location, etc.), with the exception of the salary. Your actions?

**For notes**

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**Date of the performing the work** \_\_\_\_\_\_\_\_\_\_\_\_ **Signature of the teacher** \_\_\_\_\_\_\_\_

**TOPIC № 7**

**BASICS OF MEDICAL SERVICES MARKETING. ORGANIZATION OF MARKETING ACTIVITY IN MEDICAL INSTITUTIONS**

**Purpose of the class**. To learn modern methods of medical services market.

**Know.** Key economic categories of marketing (demand, value, request). Strategy and tactics of marketing. Components of marketing activities for medical institutions. Medical care and health services. Economic characteristics of health services. Types of marketing depending on demand. Content and process marketing management. Means of information distribution and assessment of advertising effectiveness. Marketing control.

**Be able to.** Learn the basics of marketing activities for medical institutions

**The main questions to study:**

1. The essence of marketing. Key categories of marketing.

2. The concept of marketing activities.

3. Normative and legal support of the functioning of the market of medical services.

4. The essence of medical services.

5. Marketing concepts.

6. Types of marketing.

7. Marketing management.

8. Marketing control.

**Control questions**

1. General marketing concept, definition, examples.

2. Fields of marketing activity in public health.

3 Purpose and tasks of marketing of medical services.

4. Conception of marketing.

5 Types of marketing depending on market coverage strategy.

6. Types of marketing depending on need of merchandise and service of public health

7. Functions of marketing.

8. Objects of marketing or it main categories.

9. Properties of medical service.

10. Methods of marketing activity.

11. Marketing management and it stages.

12.First stage of marketing management, marketing environment of medical institution, external and internal environment.

13. Second stage of marketing management, market segmentation.

14.Third stage of marketing management, marketing communications.

15. Concept about an advertisement, it purposes, functions and forms.

16.Fourth stage of marketing management, it planning.

17. Control of marketing.

18. Types of marketing activity.

**Tasks for solution (discussion)**

1. Determine the need to apply the concept of marketing in the activities of medical institutions.

2. Give examples of active use of marketing in health care, analyse them.

3. Illustrate subjects and objects of marketing of the market of medical services.

4. Determine the difference between medical services and other goods and services.

5. Determine the properties of medical services and their impact on the activities of medical institutions.

6. Compare the concepts of marketing activities.

7. Compare the different types of marketing. Illustrate their use by examples.

8. Analyze marketing methods. Give examples of their use. Identify the situations in which each of the methods will be appropriate and vice versa.

9. Describe the process of marketing management by the example of marketing a particular service or institution.

10. Give examples of rational and irrational use of methods of sales promotion.

11. Give examples from the real life of various forms of advertising. Analyze these examples.

**Situational tasks**

Your actions in point of view of marketing in the following situations?

1. The number of patients decreased for the quarter by 10%:

- in a private medical institution;

- in a budgetary medical institution.

2. The level of inflation in the country is 15%, there is a decline in the economy and rising unemployment.

3. A new private medical facility has been opened in your area.

4. You decided to open a new medical institution.

5. You have expanded the range of medical services provided.

6. Will you use and which forms of advertising and methods of sales promotion, if:

- You work in a private medical institution;

- You work in a budget medical institution;

- next to you opened a competitive institution;

- You have expanded the range of services;

- the economy is characterized by a recession;

- the economy is characterized by recovery;

7. You are a beginning doctor in a polyclinic or a hospital.

**For notes**

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**Date of the performing the work** \_\_\_\_\_\_\_\_\_\_\_\_ **Signature of the teacher** \_\_\_\_\_\_\_\_

**TOPIC № 8**

**METHOD OF INVESTIGATION OF PUBLIC HEALTH MARKET**

**Purpose of the class.** To acquaint students with the methods of marketing research to the market of medical services and also with the features to the market of services of public health.

**To know.** Regularities of forming, functioning and feature to the market of public health. Organizationally – economic and legal methods of adjusting of market of services of public health. Basic parameters to the market of services of public health: demand, suggestion, price, competition. Types of competition structures. Process of marketing research. Analysis of possibilities of market of medical services.

**To be able to**. To conduct complex marketing research to the market of services of public health. Use methods and tools of marketing research.

**The main questions to study:**

1. The concept of the market and the types of markets.

2. The essence, objectives and principles of marketing research.

3. Basic methods of market research.

**Control questions.**

1. The concept of “the market.»

2. Strengths and weaknesses of market relations.

3. Basic principles of forming of market relations are in public health.

4. Classification of markets of medical services

5.Perfect (highly competitive, perfect, free) market:

6. Type of competition strategy of establishments by comparison to certain biological behavior

7. Imperfect market, market monopoly. Give determination of concept “monopoly», “duopoly» and “monopsony», comment on them.

6. Indications of monopoly market in public.

7. Specific ofoligopolymarket of medical services and goods.

8. Natural, clean and absolute monopoly.

9. Artificial monopolizes,their representatives

10. Characterize markets of medical services and goods by criterions of their legality.

11 Basic concepts of demand, suggestion and price, their role, are in forming of market of medical services and goods

12. Elasticity coefficient as quality characteristic of changes of supply and demand.

13. Characterize specific lines of market of medical services and goods.

14. Essence of asymmetricness on market of medical services and goods.

15 Enumerate basic operating of market relations conditions in a medical sphere

16. Basic functions of market of services and goods of the medical setting.

17. What is marketing research and what basic tasks it decides?

18. Basic principles of marketing research.

19. Factors of external and internal environment of establishment (macroenvironment and microenvironment).

20 Method of study of environment of establishment is the so – called method of STEP – of analysis.

21. Method of study of internal environment of TPE using so – called “SWOT – analysis».

22. Method of marketing research “ABC – analysis» and “VEN – analysis».

23. Method of marketing research “Observation»

24. Method of marketing research “Survey “

25. Method of marketing research “Experiment»

26. Method of marketing research “Panel»

27. Method of marketing research» Expert evaluation method “

28. Method of marketing research» Benchmarking»

29. Method of marketing research “Focus group research»

30. Stages of marketing research**.**

**Tasks for solution (discussion)**

1. Describe the health services market in Ukraine. Is it homogeneous? What features does it have?

2. Identify the situations in which a marketing research is required.

3. Give examples of implementation of various competitive strategies of firms.

4. Give examples of market monopoly. Evaluate its activities from the point of view of the consumer and the institution.

5. Compare the methods of marketing research of the market, evaluate their advantages and disadvantages and give examples of use.

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**Situational tasks**

1. Describe the factors of extras and internal macro environment that you will be studying when conducting a marketing research for:

- a district clinic;

- private medical institution;

- medical laboratory;

- dental clinic;

- dental office;

- analysis of the market of medical services in the city.

2. Describe the set and specific implementation of market research methods in the following cases:

- for the district polyclinic;

- for an in-patient outpatient clinic;

- for medical laboratory;

- in case of a significant level of inflation and changes in the economic situation in the region;

- in case of a monthly reduction in the number of patients by 5%;

- in case of expansion of the activity of the institution;

- for the dental clinic;

- for the dental office;

- for an individual specialist.

3. Think over, develop and present the marketing management system for:

- a district clinic;

- private medical institution (big city, district center, village);

- medical laboratory (big city, district center, village);

- dental clinic (big city, district center, village, private, budgetary);

- dental office (big city, district center, village);

- a separate specialist (a big city, a district center, a village, in a private and budgetary sphere).

**For notes**

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**Date of the performing the work** \_\_\_\_\_\_\_\_\_\_\_\_ **Signature of the teacher** \_\_\_\_\_\_\_\_

**TOPIC № 9**

**THE PRICE-MARKING OF MEDICAL SERVICES**

**Purpose of the class.** Introduce students to mechanisms of pricing and price adjustment in healthcare system.

**Know**. Price as an economic category, its importance for economic activity of medical institutions and healthcare system. Types of prices. Features of pricing and price adjustment in healthcare system. Development of a pricing strategy to fulfil economic targets of medical institutions.

**Be able**. To obtain skills in calculating the cost (price) of outpatient care for a patient and the cost of providing outpatient care to the population according to health groups and quality of facility’s services.

**The main questions to study:**

1. The essence of the concept of price, its functions in a market economy.

2. Factors affecting the price of medical services.

3. The process of setting the price for a new product.

4. General characteristics of pricing techniques.

5. Methods and types of pricing.

**To help with independent work**

**Example of pricing outpatient care per patient depending on health group.**

Clinic serves 30,000 adults. Clinic's current budget this year was UAH 2433500. In accordance with general distribution of the population by health groups (groups of follow – up) expert committee, set up in the clinic, studied data of centralized clinical examination office on the number of patients staying in the clinic. The result of the study was expert opinion regarding the number of patients in each complexity group (Table 1).

Calculate:

1. Value (price) of outpatient services per patient in each health group.

2. The cost of outpatient care of patients in each health group.

Basing on these data, draw a conclusion

*Тable 1*

**Calculation of cost (prices) of maintenance of one patient (depending on the group of dynamic supervision) and expenses on providing of ambulatory – policlinic aid on the whole on the groups of health on beginning of year.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Group of health | Distribution of population on the groups of health | Coefficient of complication on groups(CС) | Total amount of coefficients of complication | Сost of maintenance of one patient(hrn.) | Cost of maintenance of groups of health |
| D – I | 7000 | 0,7 | 4900 | 25,17 | 176190,0 |
| D – II | 9220 | 1,8 | 16596 | 64,74 | 596902,8 |
| D – III | 10170 | 3,0 | 30510 | 107,91 | 1097444,7 |
| D – IV | 3010 | 4,0 | 12040 | 143,88 | 433078,8 |
| D – V | 600 | 6,0 | 3600 | 215,82 | 129492,0 |
| Total | 30000 | 15,5 | 67646 | 557,52 | 2433108,3 |

**Algorithm of decision**

1. Define the amount of coefficients of complication on every group by the way of multiplying of CС of every group on the amount of habitants. In the examined task the quantity of population in the group of health of D – I made 7000 persons, and CС = 0,7. Consequently, the sum of coefficients of complication for a group D – I will be equal: 0,7 \* 7000 = 4900.

2. Define the sum of coefficients of complication, adding up the coefficients of complication on all groups of health: 4900 + 16596 + 30510 + 12040 + 3600 = 67646

3. Define the cost of one unit of СС. In the examined task the budget of policlinic makes 2433500 hrn.s, sum of СС – 67646. Dividing them we will get the cost of one unit of КС, that in this case is equal, : 2433500 : 67646 = 35,97 hrn.s

4. Define the cost of one ambulatory – policlinic patient (to multiply the cost of one unit of КС on the coefficient of complication of every group):

D – I = 35.97 \* 0.7 = 25.17 hrn.

D – II = 35.97 \* 1.8 = 64.74hrn

And further like.

5. Define the cost of patient care in each of the groups of health (cost of service of one patient multiplied by the number of people in the group):

Д – I = 25,17 \* 7000 = 176190,0 hrn.

Д – II = 64,74 \* 9220 = 596902,8hrn.

And further like.

6. Define the total worth of ambulatory – policlinic maintenance of habitants, that consists of sum of costs of every group of health:

176190.0 + 596902.8 + 1097444.7 + 433078.8 + 129492.0 = 2433108.3 (.hrn)

Conclusion: the cost of outpatient care is differentiated by health status of the population, ranging from 25.2 UAH to 215.8 UAH.

Calculating the cost (price) of patient care in each group and the total cost of treatment for patients in these groups is correct, as total cost of servicing for people attached to the clinic – 2,433,108.3 UAH., is almost equal to budget allocated funds – 243350.0 (the difference of 391.7 UAH. is caused by rounding the cost of one unit of complexity).

In order to study cost – effectiveness, we need to consider what happens if prophylactic measures have improved health status of the population served, leading to a transfer of part of the population from more adverse health groups to more favorable (Table 2) – reduce in the number of healthy people (D – II) and patients in the state of decompensating (D – V), increase in the number of healthy people attached to outpatient clinics (D – I).

We need to calculate the cost of outpatient care taking into account structural changes occurred in health groups of served population.

Clinic's budget (UAH 2433500) and prices for service according to health groups established by expert committee per patient remain the same

*Table 2*

**Redistribution attached to TPE of population on the groups of health on the end of year and expense on his service.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Group of health | Distribution of population on the groups of health | Quantity of population on the groups of health on the end of year | Cost(price) of maintenance of one patient | Cost(expenses) of maintenance of groups of health |
| D – I | 7000 | 9500 | 25,17 | 239115,0 |
| D – II | 9220 | 6500 | 64,74 | 420810,0 |
| D – III | 10170 | 10000 | 107,91 | 1079100,0 |
| D – IV | 3010 | 3500 | 143,88 | 503580,0 |
| D – V | 600 | 500 | 215,82 | 107910,0 |
| Total | 30000 | 30000 | 557,52 | 2350515,0 |

**Algorithm of decision.**

1. Definition of the costs of maintenance of every group. To multiply the cost of maintenance of one patient of every group (table. 1) on the amount of population in these groups(table. 2).

25.17 hrn. \* 9500 = 23940hrn

64.74 hrn. \* 6500 = 42055hrn.

Like and on other groups.

2. Define the total worth of maintenance of the habitants attached to policlinic : it consists of sum of expenses on every group of health:

239115,0 + 420810,0 + 1079100,0 + 503580,0 + 107910 = 2350515,0 hrn.

3. Define the difference between the budget of policlinic and expenses on medical service of population. It made:

2433500,0 – 2350515,0 = 82985hrn.

**Conclusion.** Due to improved health status of the population (increased number of people in D – I group, reduced number in the group of practically healthy people D – II, patients in decompensation (D – V) expenditures for medical care have reduced. This resulted in savings of UAH 82985.0. which healthcare facility can use for economic incentives of employees and improvement of its material and technical equipment.

**INDEPENDENT WORK**

District clinic serves\_\_\_\_\_\_\_\_\_ adults. Clinic's current budget this year was UAH 2433500. In accordance with general distribution of the population by health groups (groups of follow – up) expert committee, set up in the clinic, studied data of centralized clinical examination office on the number of patients staying in the clinic. The result of the study was expert opinion regarding the number of patients in each complexity group (Annex 7).

**Task:**

Using workbook annex 7 copy tables to your notebook, then write down raw data and calculate:

1. Value (price) of outpatient services per patient in each health group.

2. The costs of outpatient care for patients in each health group.

3. Record all calculations into the table.

Basing on these data, draw a conclusion.

 *Table 1*

**Calculation of cost (prices) of maintenance of one patient (depending on the group of dynamic supervision) and expenses on providing of ambulatory – policlinic aid on the whole on the groups of health on beginning of year on a variant \_\_\_\_\_**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Group of health | Distribution of population on the groups of health | Coefficient of complication on groups(CС)) | Total amount of coefficients of complication | Сost of maintenance of one patient(hrn.) | Cost of maintenance of groups of health |
| D – I |  |  |  |  |  |
| D – II |  |  |  |  |  |
| D – III |  |  |  |  |  |
| D – IV |  |  |  |  |  |
| D – V |  |  |  |  |  |
| Total |  |  |  |  |  |

*Table 2*

**Redistribution attached to TPE of population on the groups of health on the end of year and expense on his service on a variant \_\_\_\_\_**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Group of health | Distribution of population on the groups of health | Quantity of population on the groups of health on the end of year | Cost(price) of maintenance of one patient | Cost (expenses) of maintenance of groups of health |
| D – I |  |  |  |  |
| D – II |  |  |  |  |
| D – III |  |  |  |  |
| D – IV |  |  |  |  |
| D – V |  |  |  |  |
| Total |  |  |  |  |

**Decision:**

**1. Define the mount of coefficients of complication on every group.**

In the group of health of D – I : \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_.

In the group of health of D – II : \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_.

In the group of health of D – III : \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_.

In the group of health of D – IV : \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_.

In the group of health of D – V : \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_.

**2. Define the sum of coefficients of complication.**

\_\_\_\_\_\_ + \_\_\_\_\_\_ + \_\_\_\_\_\_ + \_\_\_\_\_\_ + \_\_\_\_\_\_ = \_\_\_\_\_\_.

**3. Define the cost of one unit of CС**

\_\_\_\_\_\_ : \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

**4. Define the cost of one ambulatory – policlinic patient.**

In the group of health of D – I : \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

In the group of health of D – II : \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

In the group of health of D – III : \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

In the group of health of D – IV : \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

In the group of health of D – V : \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

**5. Define the cost of maintenance of patients is in each of groups of health**

n the group of health of D – I : \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

In the group of health of D – II : \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

In the group of health of D – III : \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

In the group of health of D – IV : \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

In the group of health of D – V : \_\_\_\_\_\_ \* \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

6**. Define the total worth of ambulatory – policlinic maintenance of habitants.**

\_\_\_\_\_\_ + \_\_\_\_\_\_ + \_\_\_\_\_\_ + \_\_\_\_\_\_ + \_\_\_\_\_\_ = \_\_\_\_\_\_.hrn.

**Conclusion:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Inorder to study cost – effectiveness, we need to consider what happens if prophylactic measures have improved health status of the population served, leading to a transfer of part of the population from more adverse health groups to more favorable (Annex 7) – reduce in the number of healthy people (D – II) and patients in the state of decompensating (D – V), increase in the number of healthy people attached to outpatient clinics (D – I).

We need to calculate the cost of outpatient care taking into account these structural changes that have occurred in groups of health served population. Clinic's budget and prices for serving a patient according to health groups established by an expert committee remain the same.

**1. Define the cost of maintenance of every group.**

the group of health of D – I : \_\_\_\_\_\_ hrn. \* \_\_\_\_\_\_ = \_\_\_\_\_\_ of hrn.

the group of health of D – II : \_\_\_\_\_\_ hrn. \* \_\_\_\_\_\_ = \_\_\_\_\_\_ of hrn.

In the group of health of D – III : \_\_\_\_\_\_ hrn. \* \_\_\_\_\_\_ = \_\_\_\_\_\_ of hrn.

In the group of health of D – IV : \_\_\_\_\_\_ hrn. \* \_\_\_\_\_\_ = \_\_\_\_\_\_ of hrn.

In the group of health of D – V : \_\_\_\_\_\_ hrn. \* \_\_\_\_\_\_ = \_\_\_\_\_\_ of hrn.

**2.Define the total worth of maintenance of the habitants attached to a policlinic.**

\_\_\_\_\_\_ + \_\_\_\_\_\_ + \_\_\_\_\_\_ + \_\_\_\_\_\_ + \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn

**3. Define the difference between the budget of policlinic and expenses on medical service of population.**

\_\_\_\_\_\_ – \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

**Conclusion:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Control questions.**

1. Assessment of product or service price, price structure.

2. Types of pricing.

3. Prices for new medical products and services.

4. Prices for existing medical services and products.

5. How factors of external and internal environment influence pricing.

6. General characteristics of pricing methods.

7. Four major groups of prices in budgetary institutions of Ukrainian market.

8. Purpose of pricing, and what is pricing in marketing.

9. Marketing concept of price.

10. Four methods of determining basic or original price.

11. Basic methods of adjusting prices.

12. Determination of price components and types of prices.

13. The role of prices in its basic functions.

14. The process of setting the price of a new product.

15. Price adjustment, methods of state influence.

16. Indicators of financial analysis of a facility.

17. Consumer response to price changes.

18. Basic provisions to define the cost of health care in budgetary institutions.

19. Main and auxiliary departments of healthcare facilities in pricing.

20. Direct and indirect costs in pricing.

21. Calculation of medical services cost in budgetary institutions.

22. The main and auxiliary staff.

23. Compensation payments for additional wage.

**Tasks for solution (discussion)**

1. Explain the essence of the concepts of cost and expenses.

2. Disclose the essence of production and full cost and their value in pricing.

3. Explain the implementation of the price functions.

4. Compare the methods for determining the base price.

5. Compare pricing methods and illustrate their use with examples.

6. Explain the effect of methods that adjust prices.

7. Analyze the ways of state regulation of pricing in health care.

**For notes**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_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**Date of the performing the work** \_\_\_\_\_\_\_\_\_\_\_\_ **Signature of the teacher** \_\_\_\_\_\_\_\_

**TOPIC № 10**

**METHODOLOGY OF INSURANCE TARIFFS FOR VOLUNTARY MEDICAL INSURANCE**

**Purpose of the class.** To introduce students to the basics of health insurance. To master the technique of determining the value of insurance policy in case of voluntary health insurance.

**Know**. Contents of insurance, types of health insurance. Economic analysis of health insurance in different countries. Place and role of a general practitioner in health insurance system. Arrangement of the quality control for medical services in health insurance. Insurer’s financial strength. Insurance reserves.

**Be able**. To operate with the main categories of insurance medicine. To determine the factors that affect the size of the insurance rate. To determine insurance rates for voluntary health insurance.

**The main questions to study:**

1. The essence of the health insurance system, its features.

2. Types of health insurance.

3. Subjects and objects of the market of medical insurance.

4. Pricing in insurance medicine.

**To help with independent work**

**Example calculation of insurance tariff
for voluntary health insurance on the insurance plan
of outpatient care considering correction rate for disease risk.**

Artem Ivanovich, 35, employee, turned to Health insurance company for voluntary medical insurance to obtain outpatient care.

Expert evaluation of hospital records, survey and comprehensive medical examination revealed that he has chronic bronchitis (last hospitalization was the previous year), over the past 12 months he was unable to work three times (due to acute respiratory infections, 12 working days). Smokes 10 cigarettes a day, consume alcohol no more than once a week. It is necessary to determine premium size depending on the desired amount of coverage and correction rates to account for the risk of disease.

The algorithm premium calculation depending on the desired size of coverage and correction rate to account for the risk of disease consists of four steps.

**Step 1.** Premium for the insurance plan of outpatient care is determined using tariff rates approved by the Committee for control over insurance business in Ukraine (1997), (Table 1).

According to the table, tariff rate of insurance plan is 10.04% of insurance liability.

In general, each class corresponds to 2 tariffs of diseases, one for the calculation of insurance premiums under the plan of outpatient care (column 3), the other – for the calculation of insurance premiums for hospital care program (column 4).

*Table 1*

**Tariff rates and coverage of medical programs.**

|  |  |
| --- | --- |
| Class of disease (characteristic of medical insurance coverage) | Tariff rates according to elements of insurance coverage for medical programs (in per cent depending on the volume of insurance liability) |
| Outpatient care rendered to the insured | Hospital care rendered to the insured | Full medical care program |
| 1. | Neoplasms | 1,05 | 0,304 | 1,354 |
| 2. | Endocrine system diseases | 1,16 | 0,276 | 1,436 |
| 3. | Diseases of the blood and blood – forming organs | 0,53 | 0,111 | 0,641 |
| 4. | Mental disorders | 1,05 | 0,138 | 1,188 |
| 5. | Nervous system diseases | 1,05 | 0,160 | 1,210 |
| 6. | Diseases of the circulatory system | 1,05 | 0,174 | 1,224 |
| 7. | Diseases of the respiratory system | 1,05 | 0,228 | 1,278 |
| 8. | Diseases of the digestive system | 0,74 | 0,353 | 1,093 |
| 9. | Diseases of the genitourinary system | 0,95 | 0,229 | 1,179 |
| 10. | Diseases of the skin and subcutaneous tissue | 0,46 | 0,133 | 0,593 |
| 11. | Musculoskeletal disorders | 0,53 | 0,266 | 0,796 |
| All classes (full coverage) | 10,04 | 2,538 | 12,578 |

*Table 2*

**Correction rate to account for the degree of risk**

|  |  |  |
| --- | --- | --- |
| Factor | Graduation | Correction rate |
| Frequency of alcohol consumption | Abstains from alcohol | 0,95 |
| Once a month | 1,00 |
| Once a week | 1,05 |
| 3 times a week | 1,10 |
| Every day | 1,15 |
| Smoking | Doesn’t smoke | 0,95 |
| 1 cigarette a week | 1,00 |
| 1 cigarette a day | 1,05 |
| 2 – 10 cigarettes a day | 1,10 |
| 11 – 20 cigarettes a day | 1,15 |
| Cold – related diseases frequency (over the last 12 months) | Absent | 0,90 |
| Once | 0,95 |
| 2 – 3 times | 1,00 |
| 4 times | 1,10 |
| 5 – 12 times | 1,30 |
| More than 12 times | 1,35 |
| Cases of hospital treatment over the last 12 months | Absent | 0,80 |
| 1 case | 1,00 |
| More than 1 case | 1,30 |
| Chronic diseases over the last 5 years | absent | 0.8 |
| 1 chronic disease | 0,95 |
| 2 chronic diseases | 1,00 |
| 3 chronic diseases | 1,30 |
| More than 4 | 1,80 |
| Total number of disability days(over the last 12 months) | 0 | 0,80 |
| 5 | 1,00 |
| 10 | 1,20 |
| 20 | 1,60 |
| 30 | 2,00 |

The sum of these two components is tariff rate for the full insurance plan for each class of diseases in general.

**Step 2.** According to “Insurance regulations..» of “Health» insurance company, the increased risk of diseases is accounted with the help of correction rates (the insurer individualizes insurance technology, given the state of health and the risks of a particular person). Given that Artem Ivanovich has adverse factors that form more probable need for health care insurance, we must take into account appropriate correction rates to account for the degree of risk (Table 2), as follows:

 – 0.95 – chronic bronchitis (12 days of inpatient care in the previous year);

 – 1.20 – disability over the past 12 months (12 days);

 – 1.10 – smoking cigarettes (10 a day);

 – 1.05 – frequency of alcohol consumption (once a week);

The above factors increase the need for insurance protection, and therefore legally allow insurance companies to use correction rates. The list of similar factors is controlled by the State Committee for supervision of insurance activities in Ukraine.

**Step 3.** Calculate individual insurance tariff (IIT) according to the individual rate:

IIT = 10.04 \* 0.95 \* 1.20 \* 1.10 \* 1.05 = 18.885% of the insurance cover.

*Таблица 3*

|  |  |  |
| --- | --- | --- |
|  |  | Cost of the insurance programs |
| Outpatient aid insured | Inpatient medicare insured | Complete program of medicare |
| 1. | Oncology | 198,70 | 131,96 | 230,66 |
| 2. | pathology of endocrine system | 209,04 | 125,94 | 234,99 |
| 3. | Illnesses of blood and hematogenesis organs | 149,82 | 110,43 | 160,26 |
| 4. | Psychonosemas | 198,70 | 112,97 | 211,68 |
| 5. | Illnesses of the nervous system | 198,70 | 115,04 | 213,74 |
| 6. | Illnesses of the system of blood circulation | 198,70 | 116,36 | 215,06 |
| 7. | Illnesses of breathing organs | 198,70 | 121,43 | 220,14 |
| 8. | Illnesses of digestion organs | 169,56 | 133,18 | 202,75 |
| 9. | Болезни мочеполовой системы | 189,30 | 121,53 | 210,83 |
| 10. | Illnesses of skin and hypodermic – fatty cellulose | 143,24 | 112,50 | 155,74 |
| 11. | Bone – muscular system | 149,82 | 125,00 | 174,82 |
| All classes(full insurance cover) | 2043,79 | 1338,58 | 2282,37 |

**Step 4.** Thus, the insurance premium for Artem Ivanovich’s voluntary insurance plan is 18.885% of the program cost of outpatient care. To determine absolute value of the premium we use the data on the cost of medical insurance plan for combined municipal hospital No.55 accredited by the MOH (Tables 3 and 4), which is the clinical base for Health insurance company.

According to the table, the cost of outpatient care is UAH 2043.79.

Basing on the size of individual insurance rates and the cost of insurance plan for outpatient care, we have the absolute premium value (APV), which is:

АЗСВ = 18,885 \* 2043,79 = 385,97 hrn / year

Cost of medicare on the different programs of medical insurance in the incorporated municipal hospital № 55

 *Table 4*

**Base tariff rates on the types of setting of insurance payments depending on age of insured**

|  |  |
| --- | --- |
| Age of the insured person(complete years) | Insurance tariff(%%) |
| For indemnification of loss of earnings or other profits | For indemnification of expenses on the receipt of medical services, medicinal facilities of and other |
| 18 – 24 | 3,76 | 16,02 |
| 25 – 29 | 3,89 | 16,58 |
| 30 – 34 | 4,02 | 17,14 |
| 35 – 39 | 4,20 | 17,88 |
| 40 – 44 | 4,37 | 18,63 |
| 45 – 49 | 4,54 | 19,38 |
| 50 – 54 | 4,76 | 20,31 |
| 55 – 56 | 4,98 | 21,34 |

**Independent work**

Basing on the data given in case studies (Annex 8), solve a case study and determine insurance tariffs of voluntary health insurance plan for outpatient care. Calculate the premium depending on the desired size of coverage and correction rates according to the degree of disease risk.

**Solution:**

1. Determine tariff rate for an insurance plan of outpatient care using tariff rates and coverage of medical programs shown in Table 1 (see above). Tariff rate for outpatient care is 10.04% of the insurance liability.

2. Determine correction rates to account for the increased risk of disease using health status and including risk of adverse factors for particular insured person in Table 2 (see above); add your data to Table 5:

***Table 5***

**Correction rates to account for the degree of risk depending on the graduation (relative values)**

|  |  |  |
| --- | --- | --- |
| No. | Factor | Correction rate |
| 1. | Frequency of alcohol consumption |  |
| 2. | Smoking |  |
| 3. | Cold – related diseases frequency (over the last 12 months) |  |
| 4. | Cases of hospital treatment over the last 12 months |  |
| 5. | Chronic diseases over the last 5 years |  |
| 6. | Total number of disability days(over the last 12 months) |  |

1. Calculate individual insurance tariff (IIT):

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IIT = | Tariff rate according to insurance plan (%) \_\_\_\_\_\_ | \* | Rates based on individual health status (R1 \_\_\* R2 \_\_\* R3 \_\_\* R4 \_\_\* R5 \_\_\* R6\_\_) | = \_\_\_\_\_\_ |

4. Determine absolute premium value according to voluntary insurance plan for combined municipal hospital No.55 (clinical base for “Health» insurance company) – Table 3 (see above). Basing on the cost of insurance plan for outpatient care (943.79 UAH.) and individual insurance tariff we obtain the absolute premium value (APV).

 APV = TR \* ITR \_\_\_\_\_\_ \_\_\_\_\_\_ = \_\_\_\_\_\_ (hrn / year)

**Control questions.**

1. Financing and organizational systems of health care in the world.

2. “Health insurance» and» insurance medicine», their aim.

3. Main funding for medical insurance.

4. Implementation of compulsory health insurance.

5. Implementation of voluntary health insurance.

6. Components of health insurance, rights and duties of insurance subjects.

7. Liabilities of policy holders and insurers in health insurance system.

8. Medical service suppliers in health insurance system.

9. Insurance policy and its functions.

10. Rights of the insured.

11. Types of insurance risks.

12. Financial nature of health insurance.

13. Contract prices for medical services.

14. Health insurance in different countries (Germany, France, Japan).

15. Problems of introducing health insurance in Ukraine.

16. Quality of medical services for different types of insurance

**Tasks for solution (discussion)**

1. Identify the advantages and disadvantages of insurance medicine for the patient, medical institutions, the country.

2. Identify the problems and prospects for introducing insurance medicine in Ukraine.

3. Give examples of subjects and the object of the health insurance market.

4. Identify the specific features of health insurance contracts.

5. Does health insurance promote the spread of a healthy lifestyle and why?

**For notes**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Date of the performing the work** \_\_\_\_\_\_\_\_\_\_\_\_ **Signature of the teacher** \_\_\_\_\_\_\_\_

**TOPIC № 11**

**METHODOLOGY OF ESTIMATE OF MEDICAL, SOCIAL AND ECONOMIC EFFICIENCY OF HEALTHCARE ESTABLISHMENTS**

**Purpose of the class**.To study the methods of assessment the medical, social and economic efficiency of health institutions.

**Know**. Essence of efficiency and its types. Criteria of medical effectiveness of health care. Social efficiency and its criteria. Methods of study and analysis of cost – effectiveness of health care. Economic effect and cost – effectiveness. Direct and indirect costs.

**Be able.** To assess medical, social, and economic efficiency in health care and to determine most effective ways of managing healthcare resources.

**The main questions to study:**

1. The essence of efficiency, its importance in economic activity. Types of efficiency.

2. Medical efficiency.

3. Social effectiveness.

4. Economic efficiency, its types.

**INDEPENDENT WORK**

As a result of regional health and social programs over the past five years local health authorities conducted multidirectional medical, social, environmental and other activities that have had an impact on public health (fertility, mortality, morbidity with temporary disability, etc.) and healthcare facilities (CDH, dispensary, SES, health center, etc.). The results are presented in Annex 9 and 10. On the basis of these data, calculate and evaluate:

 – Medical efficiency;

 – Social efficiency;

 – Economic efficiency.

 – draw your conclusion on the implementation of regional health and social programs.

**Calculation of medical efficiency:**

Rme for the year = (\_\_\_\_\_\_ / \_\_\_\_\_\_) \* 100% = \_\_\_\_\_\_%

Rme for the current year = (\_\_\_\_\_\_ / \_\_\_\_\_\_) \* 100% = \_\_\_\_\_\_%

**Conclusion**: medical efficiency in CDH this year compared to the previous \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Calculation of social efficiency:**

**Absolute increase** (the difference between the subsequent and the previous levels):

\_\_\_\_\_\_ – \_\_\_\_\_\_ = \_\_\_\_\_\_ ‰.

**Accession rate** (percentage of absolute increase to the previous level):

(\_\_\_\_\_\_ / \_\_\_\_\_\_) \* 100% = \_\_\_\_\_\_%

**Growth rate** (the percentage of subsequent level to the previous level):

(\_\_\_\_\_\_ / \_\_\_\_\_\_) \* 100% = \_\_\_\_\_\_%

**Conclusion:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Calculation of economic efficiency:**

***An economic damage to the previous year made:***

(\_\_\_\_\_\_ \* \_\_\_\_\_\_) + (\_\_\_\_\_\_ \* \_\_\_\_\_\_) + (\_\_\_\_\_\_ \* \_\_\_\_\_\_) = \_\_\_\_\_\_ hrn.

***An economic damage to the current year made:***

(\_\_\_\_\_\_ \* \_\_\_\_\_\_) + (\_\_\_\_\_\_ \* \_\_\_\_\_\_) + (\_\_\_\_\_\_ \* \_\_\_\_\_\_) = \_\_\_\_\_\_ hrn.

***An economic effect (prevented damage) because of realization of health measures(difference between the economic damages of two years) makes***

\_\_\_\_\_\_ – \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

**Тhus, economic effect made** \_\_\_\_\_\_ hrn.

**Economic efficiency on an enterprise** *(attitude of result(effect) to expenses) made:*

\_\_\_\_\_\_ : \_\_\_\_\_\_ = \_\_\_\_\_\_ hrn.

Тhus, economic efficiency made \_\_\_\_\_\_ on 1 hrn. inlaid during realization of health measures.

In the total expenses on realization of health measures \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ***economic effect (prevented damage) resulted in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***on this enterprise.

**Control questions.**

1. What indexes can be use in public health for the estimation of the rational and effective use of resources of health protection?

2. What is medical efficiency, give examples.

3. What is social efficiency, give the examples?

4. What is economic efficiency, give the examples?

5. What is difference between economic effect and economic efficiency, give the examples?

6. Explain, what economic losses are carried by society in connection with worsening of the state of health of population.

**Tasks for solution (discussion)**

1. Explain the economic essence and the general method of determining effectiveness.

2. Explain the differences between economic, social and medical effectiveness.

3. Explain the importance of different types of effectiveness for health facilities and for the country as a whole.

4. Social efficiency can only be positive. Explain your answer.

5. Identify ways to improve the effectiveness of health facilities.

**For notes**

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**Date of the performing the work** \_\_\_\_\_\_\_\_\_\_\_\_ **Signature of the teacher** \_\_\_\_\_\_\_\_

**TOPIC № 12**

**ECONOMIC ANALYSIS IN HEALTHCARE ESTABLISHMENT`S ACTIVITY**

**Purpose of the class**. Study and development of economic analysis of health care facilities.

**Know**. Nature and significance of economic analysis for healthcare system and medical institutions. Criteria for evaluation of economic analysis in health care: “cost – effectiveness’’, “cost – benefit’’, “cost – utility’’. Limitations of economic analysis in health care. Medical intervention programs in order to make management decisions. Identification and analysis of facility’s financial condition. Main indicators of financial health for medical manufacturing companies.

**Be able**. To interpret essence of economic analysis in healthcare system, calculate and evaluate key indicators of economic activity

**The main questions to study:**

1. The essence and significance of economic analysis for the health system.

2. Criteria for assessing the effectiveness of economic analysis in health.

3. Features of economic analysis in health care.

4. Evaluation of the results of economic analysis.

**To help with independent work**

**Example of economic analysis for rheumatology department of a city hospital (Table 1).**

*Table 1*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Department | Standard bed occupancy rate (days) **D n** | Actual bed occupancy (days) **D f** | Standard length of hospital stay (days) **А n** | Actual length of hospital stay **Аf** | Targeted bed occupancy **D c** | Funds spent on bed space of a department (hryvnas) **FS** |
| Rheumatology | 330 | 345 | 16,2 | 18 | 242 | 1 000 000 |

**Calculation of actual bed turnover (Bf ).**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Bf | = | Df (345) | = | 19.2 |
| Аf (18) |

where:

Df is actual bed occupation;

Аf is actual average time of patient`s stay on bed.

**Calculation of normative bed turnover (Bn ).**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Bn | = | Dn (330) | = | 20.4 |
| Аn (16,2) |

where:

И n – normative bed occupation;

А n – normative of average duration of hospitalization.

**Calculation of coefficient of the rational use of beds fund (Cr)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cr** | = | **Bf (19,2)** | = | 0.94 |
| **Bn (20,4)** |

where:

Bf – actual bed turnover ;

Bn – normative bed turnover.

**Calculation of coefficient of target use of bed fund** (**Cc**) (attitude of the data given on the use to actual bed occupation fund)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cc** | = | **Dc (242)** | = | 0.7 |
| **Df (345)** |

where:

**Dc** is target bed fund occupation during hospitalization of in – patients (an amount of days is in a year). Determined by an expert way and expresses validity of hospitalization of patients, so the use of bed fund on purpose

**Df –** actual bed occupation.

**Calculation of coefficient of the effective use of bed fund( Cэ** )product of coefficients of the rational and target use of bed fund).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Cэ** | = | **Cr (0,94)** | \* | **Cc (0,7)** | = | 0,66 |

where:

**Cr** – coefficient of the rational use of bed fund;

**Cc**– coefficient of target use of bed fund.

Efficiency of the use of bed fund of rheumatology separation is equal to 66%

**Calculation of** economic damage(ED) because of the uneffective use of bed fund. Settles accounts as an amount of the financial moneys expended in his maintenance(SFM), increased on a difference(unit minus the coefficient of efficiency of the use of bed fund).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ED | = | **FS (1000000)** | \* | **1 – CE (1 – 0,66)** | = | 340 000 hrn |

where:

SFM – amount of the financial means expended on maintenance of all beds fund;

**Cэ** – coefficient of efficiency of the use of bed fund.

**Conclusion**: economic losses due to inefficient use of hospital beds in rheumatology department of the city hospital was 340,000 USD.

**Propositions for department improvement.**

1. To provide patients with maximum laboratory examination prior to hospitalization for an optimal use of hospital beds.

2. More effective use of day patient department during treatment and diagnostic procedures among patients on medical observation.

3. To ensure the introduction of modern methods of diagnosis and treatment at inpatient unit.

4. To provide medical staff of rheumatology department with advanced training for efficient outpatient treatment.

5. To consider the problem of timely and effective provision of in – patient medication.

**INDEPENDENT WORK**

On the basis of case studies given in Annex 11 calculate performance rates using the number of beds in one of departments of a city hospital (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ department). To do this, transfer the data from your variant into table 2.

Conduct an economic analysis of the department as follows:

1. Calculate department performance rates:

 – Rational bed occupancy ratio (Cr);

 – Targeted bed occupancy ratio (Cc);

 – Efficient bed occupancy ratio.

2. Draw conclusions.

3. Develop propositions for improving the department.

*Table 2*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Department | Standard bed occupancy rate (days) **D n** | Actual bed occupancy (days)**Df** | Standard length of hospital stay (days) **А n** | Actual length of hospital stay **Аf** | Targeted bed occupancy **=Dc** | Funds spent on bed space of a department (hryvnas) **SF** |
|  |  |  |  |  |  |  |

**1. Indicators of department** **activity.**

**Actual bed turnover (Bf )**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Bf | = | Df \_\_\_\_\_\_ | = | \_\_\_\_\_\_\_\_\_\_ |
| Аf \_\_\_\_\_\_ |

**Normative bed turnover (Bn )**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Bn | = | Dn \_\_\_\_\_\_ | = | \_\_\_\_\_\_\_\_\_\_\_ |
| Аn \_\_\_\_\_\_ |

**Coefficient of the effective use of bed fund** **(Cr)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Cr** | = | **Bf \_\_\_\_\_\_** | **=\_\_\_\_\_\_\_\_\_** |
| **Bn\_\_\_\_\_\_** |

**Coefficient of target use of bed fund** (**Cc**)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Cc | = | **Dc \_\_\_\_\_\_** | = | \_\_\_\_\_\_\_\_ |
| **Df \_\_\_\_\_\_** |

**Coefficient of the effective use of bed fund** **(Ce)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Ce** | = | **Cr \_\_\_\_\_\_** | \* | **Cc \_\_\_\_\_\_** | = | **\_\_\_\_\_\_%** |

Thus, efficiency of the use of bed fund \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_department **\_\_\_\_\_\_**%.

**Economic damage (ED)**

$$ED=SF×\left(1-C\_{E}\right)=\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_×(1-\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_)=\\_\\_\\_\\_\\_\\_\\_\\_\\_hrn.$$

**Conclusion:** an economic damage because of the ineffective use of bed fund in the rheumatology department of municipal hospital made\_\_\_\_\_\_ hrn.

**Measures on the improvement of work of department**

1.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Control questions.**

1.What is the definition of economic analysis.

2.Basic methods of economic analysis.

3.A method of comparison and it place in economic analysis.

4.Main tasks of economic analysis.

5.Types of economic analysis.

6.Criteria of estimation of effectiveness of economic analysis in public health:

 – analysis “сost **–** effectiveness’’;;

 – analysis “соst **–** utility’’;

 – analysis “сost – benefit’’;

 – analysis» сost minimization’’;

 – analysis “сost of illness’’;

 – analysis marginal cost;

 – analysis sensitivity.

7.What is discounting?

8. Economic analysis in public health.

9.What are semi – fixed costs and semi – variable costs?

10.What belongs to fixed assets, human resources, material resources?

**Tasks for solution (discussion)**

1. Identify the essence of economic analysis and the goals that it allows you to achieve.

2. Compare the methods of economic analysis and give examples of their appropriate use.

3. Explain how, with the help of economic analysis, it is possible to identify reserves to improve the efficiency of the institution.

4. Analyze the types of economic analysis and their use.

5. Compare the criteria for assessing the effectiveness of economic analysis in health care.

**For notes**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Date of the performing the work** \_\_\_\_\_\_\_\_\_\_\_\_ **Signature of the teacher** \_\_\_\_\_\_\_\_

**TOPIC № 13**

**METHODOLOGY OF FINANCE ANALYSIS OF ECONOMIC ACTIVITY OF MEDICAL ESTABLISHMENT**

**Purpose of the class.** To introduce students with the organization and conduct of business financial analysis of medical institutions.

**To know.** The essence of financial analysis in public health. The financial condition of the medical institutions and mechanisms to assess it. Study of the effectiveness of financial and economic activity of the medical facilities.

**Be able to.** Analyze basis indexes of financial activity of treatment and prophylactic establishment

**The main questions to study:**

1. The main provisions of financial analysis, its use in the field of healthcare.

2. Assessment and analysis of the economic potential of medical institutions.

3. Evaluation and analysis of the results of financial and economic activities of a medical institution.

**INDEPENDENT WORK**

**Analyze financial and economic activities of medical institution** basing on the data presented in Annex № 12.

To do this, transfer the data of your variant to Table 1. Calculate figures, draw conclusions and provide suggestions for rational and efficient use of material and financial resources of healthcare.

*Table 1*

**Various data on economic activities of health institutions**

|  |  |
| --- | --- |
| **Indicators** |  |
| Average annual balance cost of fixed assets  |  |
| Years of service |  |
| Rated life |  |
| Fixed assets introduced this year |  |
| Average annual balance cost of fixed assets for the end of reporting year |  |
|  |  |
| Own working capital |  |
| Total working capital |  |
| Total current and non – current assets |  |
| Own working capital + long – term loans |  |
| Total borrowed funds |  |
|  |  |
| Total current assets |  |
| Total short – term liabilities |  |
| Total cost of most liquid assets |  |
|  |  |
| Profit from sales of medical goods and services |  |
| Full cost of medical goods and services |  |
| Gross income |  |
| Taxes and other payments to the budget and extrabudgetary funds |  |
| Average annual fixed assets, intangible assets and stocks (gross cost) |  |
| Average annual equity value |  |

**Solution:**

**CALCULATION OF BASIC INDICATORS OF FINANCIAL AND ECONOMIC ACTIVITY**

1. **ASSESSMENT OF FACILITY’S PROPERTY.**

**1.1. Physical depreciation of fixed assets**

**1.1.1. Financial amount of physical depreciation of fixed assets:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Average annual balance cost of fixed assets \_\_\_\_\_\_ | \* | Years of service \_\_\_\_\_\_ | = | \_\_\_\_\_\_\_ |
| Rated life \_\_\_\_\_\_ |

1.2. **Assessment of fixed assets renewal.**

**1.2.1 Fixed assets renovation ratio:**

|  |  |  |
| --- | --- | --- |
| Fixed assets introduced this year \_\_\_\_\_\_ | = | \_\_\_\_\_\_ |
| Average annual balance cost of fixed assets for the end of reporting year \_\_\_\_\_\_ |

2. **ASSESSMENT OF FACILITY’S FINANCIAL SUSTAINABILITY.**

**2.1. Financial sustainability ratio:**

|  |  |  |
| --- | --- | --- |
| Own working capital + long – term loans \_\_\_\_\_\_ | = | \_\_\_\_\_\_ |
| Total current and non – current assets \_\_\_\_\_\_ |

**2.2. Debt ratio:**

|  |  |  |
| --- | --- | --- |
| Total borrowed funds \_\_\_\_\_\_ | = | \_\_\_\_\_\_\_\_\_ |
| Own working capital \_\_\_\_\_\_ |

**2.3. Own working capital ratio:**

|  |  |  |
| --- | --- | --- |
| Own working capital \_\_\_\_\_\_ | = | \_\_\_\_\_\_\_\_\_ |
| Total working capital \_\_\_\_\_\_ |

1. **ASSESSMENT OF LIQUIDITY (SOLVENCY) OF A MEDICAL FACILITY.**

**3.1. Current liquidity ratio:**

|  |  |  |
| --- | --- | --- |
| Total current assets \_\_\_\_\_\_ | = | \_\_\_\_\_\_\_\_\_\_ |
| Total short – term liabilities \_\_\_\_\_\_ |

* 1. **Absolute liquidity ratio:**

|  |  |  |
| --- | --- | --- |
| Total cost of most liquid assets \_\_\_\_\_\_ | = | \_\_\_\_\_\_\_\_\_ |
| Total short – term liabilities \_\_\_\_\_\_ |

4. **ASSESSMENT OF EFFICIENCY OF FINNCIAL AND ECONOMIC ACTIVITY.**

**4.1. Assessment of medical institution’s profitability.**

**4.1.1.Gross (marginal) income:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Profit from sales of medical goods and services \_\_\_\_\_\_ | − | Full cost of medical products and services \_\_\_\_\_\_ | = | \_\_\_\_\_\_ |

**4.1.2. Net income:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Gross income \_\_\_\_\_\_ | − | Taxes and other payments to the budget and extrabudgetary funds \_\_\_\_\_\_ | = | \_\_\_\_\_\_ |

**4.2. Profit margin assessment.**

**4.2.1. Overall profit margin.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Gross income \_\_\_\_\_\_ | \* | 100 | = | \_\_\_\_\_\_ |
| Average annual fixed assets, intangible assets and stocks (gross cost)\_\_\_\_\_\_ |

**4.2.2.Рентабельность собственного капитала.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sum of gross income | \* | 100 | = | \_\_\_\_\_\_\_\_\_\_\_\_ |
| Average annual cost of own capital \_\_\_\_\_\_ |

***Analysis and conclusions:***

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Measures on the rational and effective use of resources**

**\_\_**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Control questions.**

1. What is financial analysis, its practical application in healthcare institutions?

2. What are the main stages of the financial analysis of a medical institution?

3. Give the definition of "Audit of financial activities of a medical institution." What are the risk zones in the economic activities of a medical institution?

4. List the resources of health care, what is financial and material resources.

5. Define the notion of "Balance Sheet".

6. What is the "Active Balance Sheet", its types for budgetary and commercial medical institutions?

8. What is the "Passive of the Balance Sheet", its types for budgetary and commercial medical institutions?

8. Give the definition of "Funds of a medical institution".

9. Name the main indicators that characterize the efficiency of the use of fixed assets.

10. How to determine the coefficient of physical depreciation of fixed assets?

11. Give examples of physical and moral obsolescence.

12. What indicators characterize the effectiveness of the use of hospital beds.

13. Evaluation of the profitability of the institution.

14. How to determine the indicator of overall profitability of the medical institution?

15. What decisions can be taken based on financial analysis?

**For notes**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Date of the performing the work** \_\_\_\_\_\_\_\_\_\_\_\_ **Signature of the teacher** \_\_\_\_\_\_\_\_

**ANNEXES**

**Individual tasks to the topic 3:**

**‘’Planning and prediction in healthcare system’’.**

*Annex 1*

**Calculation norms of loading of doctors of otpatient establishments on a 1 o'clock of work**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Annual number of working days | Staff | Number of visits per 1 hour | Number of visits on 1 habitant per year | Function of medicalstaff |
| Total | Were occupied | in a policlinic on a reception | at home |
| Paediatrics | 278 | 10 | 9 | 5,0 | 2,0 | 1,2 | 5838 |
| Obstetrics and gynaecology | 281 | 9 | 9 | 5,0 | 1,25 | 0,9 | 6322 |
| Surgery | 281 | 8 | 7 | 9,0 | 1,25 | 1,5 | 10818 |
| Neurology | 278 | 9 | 7 | 5,0 | 1,25 | 0,4 | 6255 |
| Ophthalmology | 278 | 6 | 5 | 8,0 | 1,25 | 0,5 | 9591 |

*Annex 2*

**Reference norms for the calculation of requirement in beds**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name of specialty of doctor | Selection on bed in% | Average time of patient`s stay on bed(in days) | Average annual bed occupational (days) | Bed turnover | Level of morbidity(birth – rate) in the planned period on 1000 population |
| Ophthalmology | 20 | 17 | 340 | 20 | 18 |
| Surgery | 15 | 15 | 340 | 22 | 16 |
| Obstetrics | 100 | 15 | 300 | 29 | 9 |
| Neurology | 14 | 22 | 340 | 16 | 19 |
| Paediatrics | 10 | 15 | 300 | 20 | 20 |
| Gynaecology | 70 | 12 | 345 | 60 | 14 |

**Individual tasks to the topic 5:**

**‘’Financial planning basics in healthcare establishments“.**

*Annex 3*

**Post wages of personnel and charges on patients in CDH.**

|  |  |  |
| --- | --- | --- |
| Wages of different categories of personnel of categories of CD (of hrn./mon) | Feed of patient(hrn./twenty – four hours) on department | Charges on medications and bandaging facilities |
| Doctors | Middle medical personnel | Junior medical personnel | Other personnel | Obstetrics | Paediatrics | Other department |
| 4000 | 3600 | 3400 | 3400 | 25 | 24 | 22 | 17 |

*Annex 4*

**Some data about activity of central district hospital**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Total number of beds | Structure of beds fund of **SBF**(amount of bed on departments) | Average annual bed occupationin  | Personnel of **SBF**  |
| Therapeutic | Surgery | Paediatrics | Obstetrics | Other | Obstetrics | Other department | Doctors | Middle medical personnel | Junior medical personnel | Other personnel |
| 1 | 295 | 60 | 60 | 55 | 40 | 80 | 300 | 340 | 80 | 160 | 76 | 58 |
| 2 | 300 | 60 | 60 | 60 | 40 | 80 | 310 | 340 | 80 | 159 | 76 | 60 |
| 3 | 250 | 60 | 60 | 40 | 30 | 60 | 300 | 340 | 68 | 120 | 70 | 60 |
| 4 | 250 | 60 | 60 | 30 | 30 | 70 | 310 | 340 | 68 | 118 | 68 | 60 |
| 5 | 250 | 70 | 60 | 40 | 30 | 50 | 300 | 340 | 68 | 119 | 70 | 59 |
| 6 | 275 | 70 | 60 | 60 | 40 | 45 | 300 | 340 | 80 | 161 | 75 | 60 |
| 7 | 295 | 70 | 60 | 60 | 40 | 65 | 310 | 340 | 80 | 162 | 76 | 60 |
| 8 | 250 | 60 | 60 | 40 | 30 | 60 | 310 | 330 | 65 | 118 | 65 | 60 |
| 9 | 250 | 60 | 50 | 40 | 30 | 70 | 300 | 330 | 65 | 119 | 64 | 60 |
| 10 | 295 | 60 | 60 | 60 | 40 | 75 | 300 | 340 | 79 | 161 | 75 | 60 |
| 11 | 300 | 60 | 60 | 60 | 50 | 70 | 310 | 330 | 80 | 160 | 75 | 60 |
| 12 | 250 | 60 | 60 | 40 | 30 | 60 | 300 | 330 | 65 | 120 | 60 | 56 |

*Annex 5*

**Total budget of hospital**

|  |  |
| --- | --- |
| Option | Total budget |
| 1, 4, 7, 10 | 19000000 |
| 2, 5, 8, 11 | 22000000 |
| 3, 6, 9, 12 | 24000000 |

**Individual tasks to the topic 6**

**«Method of payment for medical staff».**

**The size and distribution of material incentives office staff at a rate of coefficient of labour participation.**

*Annex 6*

|  |  |  |
| --- | --- | --- |
| Department (№ variant) | Sum of material incentives | Category of personnel department and coefficient of labour participation**.** |
| Doctors | Nurses | Junior nurses | LPC |
| Head of department 1,0 |  senior doctor – intern 0,9 | doctor – intern 0,8 | doctor – intern 0,7 | Head nurse 1,0 | Nurse “А» 0,9 | Nurse “B» 0,8 | Nurse “С» 0,7 | Junior nurse “А» 1,0 | Junior nurse “B» 0,9 | Junior nurse “С» 0,8 | Junior nurse “D» 0,7 |
| Surgery 1 | 4500 | 1 | 1 | 2 |  | 1 | 2 | 2 | 1 |  | 2 | 2 |  | Number of posts |
| Therapeutic 1 | 4600 | 1 | 2 |  | 1 | 1 | 1 | 1 | 3 | 1 | 1 | 2 |  |
| Neurology 1 | 4700 | 1 | 2 | 1 |  | 1 | 2 | 2 | 1 | 2 | 1 | 1 |  |
| Surgery 2 | 4500 | 1 | 1 |  | 1 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 1 |
| Therapeutic 2 | 4600 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 2 |  | 2 |  |
| Neurology 2 | 4700 | 1 | 1 | 2 |  | 1 | 2 | 1 | 2 | 1 | 2 | 1 |  |
| Surgery 3 | 4500 | 1 | 1 | 1 | 1 | 1 | 3 | 2 | 1 | 2 |  | 2 |  |
| Therapeutic 3 | 4600 | 1 | 2 |  | 1 | 1 | 1 | 2 | 2 |  | 2 | 2 |  |
| Neurology | 4700 | 1 | 1 |  | 2 | 1 | 1 | 1 | 3 | 2 | 1 | 1 |  |
| Surgery 4 | 4500 | 1 | 1 | 2 | 1 | 1 | 3 | 1 | 2 | 1 | 1 | 2 |  |
| Therapeutic 4 | 4600 | 1 | 2 | 1 |  | 1 | 1 |  | 4 | 1 |  | 2 | 1 |
| Neurology 4 | 4700 | 1 | 2 | 1 |  | 1 | 3 | 2 |  | 2 | 1 | 1 |  |
| Surgery 5 | 4500 | 1 | 2 |  | 1 | 1 | 1 | 3 | 2 | 1 | 2 | 1 |  |
| Surgery 5 | 4600 | 1 | 1 | 2 |  | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 |
| Neurology 5 | 4700 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 |  |

**Individual tasks to the topic 9:**

**«The price-making of medical services».**

*Annex 7*

**Calculation of cost(prices) of maintenance of one patient(depending on the group of dynamic supervision) and expenses on providing of outpatient help on the whole on the groups of health on beginning of year.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **District(variant** | **Quantity of population** | **Budget of policlinic** | **Group of health** | **Distribution of population****on the groups of health** | **Coefficient of complication****on groups(CС)** | **Coefficient of complication****on groups(CС)** |
| А | 33970 | 4928000 | D – I | 8000 | 0,8 | 9250 |
| D – II | 10100 | 1,7 | 9000 |
| D – III | 11200 | 3,1 | 11200 |
| D – IV | 4020 | 4,2 | 4020 |
| D – V | 650 | 6,3 | 500 |
| Total: | 33970 | 16,1 | 33970 |
| B | 34750 | 4835000 | D – I | 8200 | 0,75 | 9250 |
| D – II | 10300 | 1,8 | 9400 |
| D – III | 11500 | 3,25 | 11500 |
| D – IV | 4100 | 4,15 | 4100 |
| D – V | 650 | 6,4 | 500 |
| Total: | 34750 | 16,35 | 34750 |
| C | 34560 | 4326000 | D – I | 8150 | 0,72 | 9250 |
| D – II | 10280 | 1,76 | 9280 |
| D – III | 11350 | 3,15 | 11350 |
| D IV | 4150 | 4,1 | 4150 |
| D – V | 630 | 6,43 | 530 |
| Total: | 34560 | 16,16 | 34560 |
| D | 34505 | 3985000 | D – I | 8050 | 0,77 | 9340 |
| D – II | 10290 | 1,73 | 9155 |
| D – III | 11380 | 3,12 | 11380 |
| D – IV | 4130 | 4,05 | 4130 |
| D – V | 655 | 6,35 | 500 |
| Total: | 34505 | 16,02 | 34505 |
| E3 | 34455 | 4260000 | D – I | 8095 | 0,68 | 9295 |
| D – II | 10300 | 1,69 | 9200 |
| D – III | 11270 | 3,03 | 11270 |
| D – IV | 4155 | 4,01 | 4155 |
| D – V | 635 | 6,25 | 535 |
| Total: | 34455 | 15,66 | 34455 |

**Individual tasks for topic 10:**

**«Methodology of insurance tariff for voluntary medical insurance».**

*Annex 8*

*Insurance company “Health» in order to obtain voluntary health insurance (VHI) program of outpatient care was attended by:*

**Task 1.**

S.I. Ivanov, employee, age 24. Medical records, interview and comprehensive examination revealed that she does not smoke, frequency of alcohol consumption – once a month, over the last 12 months suffered from cold once, there was one case of hospital treatment and 5 days of disability. has one chronic disease.

**Task 2.**

V.S. Guzhva, age 45. Medical records, interview and comprehensive examination revealed that she drinks alcohol once a week, smokes 5 cigarettes a day, over the last 12 months suffered from acute cold 4 times, one case of hospital treatment, total number disability days – 20. Two chronic diseases.

**Task 3.**

S.I.Potanchik, age 50. Medical records, interview and comprehensive examination revealed that he drinks alcohol three times a week, smokes 15 cigarettes a day, over the last 12 months suffered from cold five times, 2 cases of hospital treatment, total number of disability days – 20. Has three chronic diseases.

**Task 4.**

S. Sarkysian, bus driver, age 55. Medical records, interview and comprehensive examination revealed that he drinks alcohol once a week, smokes 10 cigarettes a day. Over the last 12 months suffered from cold 4 times, 2 cases of hospital treatment, total number of disability days – 10. Has three chronic diseases.

**Task 5.**

S.T.Krasovskii, worker, 34 years. Medical records, interview and comprehensive examination revealed that he drinks alcohol three times a week, smokes 15 cigarettes a day. Over the last 12 months suffered from cold 4 times, 1 cases of hospital treatment, total number of disability days – 10. Has three chronic diseases.

**Task 6.**

L.T. Stanovskaya, age 30. Medical records, interviews and comprehensive examination revealed that she consumes alcohol once a month, does not smoke. Over the last 12 months suffered from cold 2 times, no cases of hospital treatment, total number of disability days – 5. Doesn't have chronic diseases.

**Task 7.**

V.V. Krutiy, accountant, age 45. Medical records, interview and comprehensive examination revealed that she drinks alcohol once a month, does not smoke, over the last 12 months, suffered from cold 4 times, one case of hospital treatment, total number of disability days – 20. Has two chronic diseases.

**Task 8.**

E.D.Stadnik, age 36. Medical records, interview and comprehensive examination revealed that she does not drink alcohol or smoke. Over the last 12 months suffered from cold 2 times, one case of hospital treatment, total number of disability days – 5. Has one chronic disease.

**Task 9.**

S.S.Ivanovskiy, worker, age 56. Medical records, interview and comprehensive examination revealed that he drinks alcohol daily, smokes 20 cigarettes a day. Over the last 12 months suffered from cold 5 times, 3 cases of hospital treatment. Total number of disability days – 30. Has three chronic diseases.

**Task 10.**

E.D.Kraskova, employee, age 49. Medical records, interview and comprehensive examination revealed that she drinks alcohol once a week, smokes two cigarettes a day. Over the past 12 months suffered from cold 4 times, 2 cases of hospital treatment, total number of disability days – 20. Chronic diseases – 3.

**Individual tasks to the topic 11:**

**« METHODOLOGY OF ESTIMATE OF MEDICAL, SOCIAL AND ECONOMIC EFFICIENCY OF HEALTHCARE ESTEBLISHMENTS».**

*Annex 9*

**Some indicators of the results implementation of the regional health and social programs in the region**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Administrative Region (individual variant)** | **The financial costs for the program (HRN)** | **General sick rate (per 1000 population)** | **The number of days of disability** | **The number of patients with temporary disability** |
| **Was on the sick leaf** | **Of them started to work** | **Was on the sick leaf** | **Of them started to work** |
| 2011 | 2016 | 2011 | 2016 | 2011 | 2016 |
| А | 50000 | 1726 | 1525 | 845 | 710 | 430 | 420 | 470 | 405 |
| B | 35000 | 1680 | 1543 | 860 | 720 | 440 | 410 | 450 | 415 |
| C | 25000 | 1721 | 1567 | 880 | 725 | 420 | 405 | 475 | 425 |
| D | 28000 | 1701 | 1545 | 850 | 715 | 450 | 425 | 465 | 420 |
| E | 29000 | 1712 | 1523 | 855 | 735 | 460 | 415 | 480 | 430 |
| F | 20000 | 1730 | 1578 | 860 | 740 | 480 | 430 | 490 | 410 |
| G | 26000 | 1734 | 1599 | 865 | 750 | 410 | 400 | 495 | 400 |
| H | 31000 | 1755 | 1566 | 875 | 745 | 470 | 435 | 485 | 405 |
| I | 40000 | 1723 | 1578 | 870 | 755 | 490 | 455 | 460 | 425 |
| J | 45000 | 1729 | 1511 | 890 | 760 | 415 | 405 | 470 | 420 |
| K | 47000 | 1722 | 1544 | 895 | 770 | 425 | 410 | 495 | 405 |
| L | 25000 | 1702 | 1589 | 840 | 780 | 445 | 400 | 490 | 400 |
| M | 43000 | 1722 | 1573 | 825 | 785 | 455 | 445 | 440 | 405 |
| N | 46000 | 1789 | 1582 | 820 | 775 | 485 | 420 | 445 | 410 |
| O | 37000 | 1786 | 1591 | 815 | 765 | 495 | 465 | 455 | 415 |

*Annex 10*

**The type and extent of damage associated with a temporary disability**

|  |  |
| --- | --- |
| **Type of damage**  | **Extent of damage** (hrn) |
| Not produced in GDP per worker per working day | 1000 |
| The average annual payment of one day of disability | 100 |
| Costs of treating patients in the hospital and outpatient clinics in one day | 55 |

**Individual tasks to the topic 12:**

**«ECONOMIC ANALYSIS IN HEALTHCARE ESTABLISHMENT`S ACTIVITY»**

*Annex 11*

 **Some data of use of bed fund**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Department** | **Standard bed occupancy rate (days) D n** | **Actual bed occupancy (days) D f** | **Standard length of hospital stay (days) А n** | **Actual length of hospital stay Аf** | **Targeted bed occupancy D c** | **Funds spent on bed space of a department (hryvnas) FS** |
| 1. Endocrinology  | 340 | 350 | 15 | 18 | 300 | 1 200 000 |
| 2.Therapeutic | 335 | 350 | 12 | 14 | 245 | 900 000 |
| 3. Surgical | 320 | 340 | 15,5 | 20 | 250 | 1 200 000 |
| 4. ENT department | 320 | 345 | 12,4 | 18 | 290 | 1 100 000 |
| 5. Cardiology | 330 | 345 | 17,2 | 19,6 | 300 | 1 000 000 |
| 6. Gynecological | 300 | 325 | 19,2 | 22 | 280 | 1 000 000 |
| 7. Neurologic | 340 | 350 | 18 | 22 | 275 | 950 000 |
| 8. Nephrology | 330 | 345 | 15 | 18,5 | 255 | 900 000 |
| 9. Pulmonology | 335 | 340 | 14 | 17 | 225 | 900 000 |

**Individual tasks for topic 13:**

**«Methodology of finance analysis of economic activity of medical establishment»**

*Annex 12*

**Various indicators of financial and economic activity of a healthcare facility.**

|  |  |
| --- | --- |
| **Indicators** | **Variant** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| Average annual balance cost of fixed assets  | 125 | 126 | 130 | 140 | 121 | 126 | 145 | 167 | 144 | 122 |
| Years of service | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Rated life | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| Fixed assets introduced this year | 10 | 15 | 20 | 22 | 12 | 17 | 14 | 19 | 18 | 30 |
| Average annual balance cost of fixed assets for the end of reporting year | 125 | 126 | 130 | 140 | 121 | 126 | 145 | 167 | 144 | 122 |
|  |  |  |  |  |  |  |  |  |  |  |
| Own working capital | 80 | 85 | 100 | 90 | 92 | 82 | 67 | 77 | 111 | 60 |
| Total working capital | 90 | 100 | 110 | 113 | 104 | 99 | 101 | 122 | 117 | 89 |
| Total current and non – current assets | 140 | 145 | 155 | 150 | 133 | 143 | 155 | 180 | 167 | 154 |
| Own working capital + long – term loans | 135 | 144 | 134 | 142 | 122 | 111 | 123 | 145 | 153 | 135 |
| Total borrowed funds | 20 | 40 | 50 | 54 | 25 | 45 | 60 | 75 | 24 | 34 |
|  |  |  |  |  |  |  |  |  |  |  |
| Total current assets | 16 | 20 | 25 | 30 | 35 | 40 | 18 | 55 | 43 | 33 |
| Total short – term liabilities | 5 | 10 | 15 | 20 | 25 | 40 | 45 | 54 | 35 | 18 |
| Total cost of most liquid assets | 40 | 45 | 50 | 44 | 35 | 54 | 36 | 53 | 34 | 37 |
|  |  |  |  |  |  |  |  |  |  |  |
| Profit from sales of medical goods and services | 2,4 | 2,8 | 3,8 | 4,8 | 5,7 | 5 | 6 | 3 | 7 | 8 |
| Full cost of medical goods and services | 0,8 | 1 | 3 | 3,5 | 4 | 3 | 5 | 2 | 5 | 6 |
| Gross income | 1,8 | 2 | 3,5 | 4 | 5,5 | 4 | 5,5 | 2,5 | 6 | 7 |
| Taxes and other payments to the budget and extrabudgetary funds | 0,9 | 1 | 1,7 | 2 | 2,7 | 2 | 2,5 | 1,2 | 3 | 3 |
| Average annual fixed assets, intangible assets and stocks (gross cost) | 125 | 126 | 130 | 140 | 121 | 126 | 145 | 167 | 144 | 122 |
| Average annual equity value | 4 | 5 | 6 | 7 | 5 | 8 | 9 | 10 | 9 | 4 |

The Approved Scientist by advice Kharkov national medical university. Protocol №8 from September 21, 2017 year.

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