Pharmacy Management and Economics 7th semester

Lesson 13

Topic: MATERIAL RESOURCES OF A PHARMACY ORGANIZATION: FIXED CAPITAL

1. Types of resources used by the pharmacy organization, their characteristics.

2. Fixed assets of a pharmacy organization and their classification.

3. Analysis of fixed assets: stages and sources of information. Assessment of the state of fixed assets

4. Analysis of the efficiency of the use of fixed capital.

5. Determining the need for fixed capital.

1. Types of pharmacy organization resources.

Fixed capital

Resources are the factors used to produce economic goods.

Economic resources are all natural, human and human-made resources that are used to produce goods and services.

All resources can be divided into 2 types:

material resources (land and capital);

human resources (labor and entrepreneurship).

The economic resources of a pharmacy organization consist of resources in kind (tangible) and monetary forms. The composition of the pharmacy organization's resources includes material and labor resources.

Material resources consist of fixed capital (fixed assets) and working capital (inventories).

The workforce consists of pharmacy employees, specialists who perform labor functions.

2. Fixed assets of a pharmacy organization and their classification

Fixed capital is the monetary valuation of fixed assets.

Fixed assets (**F ass**) are a set of tangible assets that repeatedly participate in the production process, while maintaining their natural form, and transfer their value in parts to newly created products.

The main differences between fixed assets are the long (more than a year) useful life and the high cost of acquisition.

The importance of fixed assets for the organization is as follows:

- ownership of fixed assets provides economic power (ownership, use, disposal);

- fixed assets determine the financial viability and business image of the organization.

Fixed assets are classified according to various criteria

1. By the nature of functioning:

production and non-production

2. On participation in the production process:

Active and passive

3. According to the natural-material form:

Buildings, machinery and equipment. Tools , Inventory. Vehicles

In pharmacy organizations, two groups of fixed assets occupy the largest share in the structure of fixed assets: machinery and equipment — about 25% on average; buildings — about 70%.

3. Analysis of fixed assets: stages and sources of information.

Assessment of the state of fixed assets

When analyzing fixed assets, you should study them

 composition,

 structure,

 dynamics,

 to assess the technical condition

determine the available reserves for their best use.

For the economic analysis of fixed assets, the following information is required:

 availability at the beginning of the analyzed period (year, quarter, month);

 receipt of fixed assets during the analyzed period;

 disposal during the analyzed period;

 availability at the end of the analyzed period;

 the amount of wear and tear.

The sources of information for analyzing the condition and use of fixed assets are accounting, statistical and operational accounting data, as well as non-accounting information.

When analyzing fixed assets, the following tasks are solved:

 assessment of the state of fixed assets;

 analysis of the efficiency of the use of fixed capital;

 determination of the need for fixed capital.

The analysis of fixed assets is carried out in 3 stages.

Step 1. Assessment of the state of fixed assets.

At the first stage, the availability of available fixed assets is determined by quantity and cost. The cost assessment can be performed by

-- initial - (the amount of costs for the manufacture or purchase of funds, their delivery and installation); 69+

-- recovery (the value of the funds at the time of their last revaluation);

-- residual (the difference between the initial or replacement cost of fixed assets and the amount of their depreciation);

-- liquidation value (the cost of selling worn-out and decommissioned fixed assets, for example, the price of scrap). Valuation of fixed assets is necessary for their accounting, analysis and planning, as well as for determining the volume and structure of capital investments.

Step 2. Analysis of the efficiency of the use of fixed capital.

At the second stage, an assessment is carried out

A) technical condition (shelf life and wear coefficients)

B) dynamics of change (coefficients of renewal, receipts, disposals, gains)

C) the degree of use (capital productivity, capital intensity, capital ratio)

E) reserves for improving the use of

Stage 3 Determines the need to purchase or write off fixed assets

4. Analysis of the effectiveness of use fixed capital.

To characterize the technical condition of fixed assets, the coefficients of shelf life and depreciation of fixed assets are used.

The *shelf life coefficient* (SL) shows the share of the residual value:

$$SL = \frac{Rval}{Bval}$$

where **Rval** and **Bval balans** - is, respectively, the residual and book value of fixed assets.

The closer this indicator is to one, the more new fixed assets are used in the organization.

The depreciation coefficient (D) shows the share of depreciation in the total value of fixed assets:

$$D = Adep : Bval\ balans$$

Where **Adep** - is the amount of depreciation of fixed assets

Bv balans -.is a book value of fixed assets.

The lower this coefficient, the more new equipment is used in the organization.

When assessing the property status of an organization, it is considered that the optimal value of the depreciation coefficient should be no more than 0.5 (or 50%):

$$SL + D = 1$$

To characterize the dynamics of fixed assets

the coefficient of renewal (Cren)

the coefficiency of access (Cacc) or Admission rate

the coefficient of disposal (Cdis),or Retirement ratio

the coefficiency of growth (Cgro) of fixed assets or Growth coefficient

are used

Cren = Cnew : Cv balance, end

Cacc= Cv rec : Cv balance, end

Cdis = Cret : Cv balance, start ,

Cgro = (Cnew- Cret) / Cv balance, start

where **Cnew** - is the cost of new fixed assets received;

Cv rec — the value of all received fixed assets;

Cv balance, start ,

Cv balance, end - book value of fixed assets, respectively, at the beginning and at the end of the period;

Cret - is the value of retired fixed assets.

If the analysis of the technical condition shows a low degree of depreciation of fixed assets (depreciation coefficient less than 0.5%)., and a negative growth coefficient, indicates a positive trend in the renewal of fixed assets (renewal occurs due to the disposal of old, worn-out funds), then the condition of fixed assets in the pharmacy is good.

The degree of use of fixed assets is important for characterizing the economic activity of a pharmacy organization.

For this purpose, both general and specific indicators characterizing the effectiveness of the use of individual groups of funds are calculated.

The generalizing performance indicators include the following

- **fund returns,**
- **capital intensity,**

- **profitability fund,**
- **Stock ratio,**

the integral coefficient of efficiency of the use of fixed assets.

The return on capital is the volume of output in monetary terms, per ruble of the The greater the return on funds, the more efficient the organization works. If the return on capital decreases, it means that in order to produce or sell the same volume of products in each period, it is necessary to have more fixed assets. Reducing the return on funds is undesirable, the pharmacy should strive to increase the return on funds annually.

For a pharmacy organization, the return on funds (**Rfunds**) is defined as the ratio of the volume of sales of goods (turnover) to the average annual cost of fixed assets:

Rfunds = T : A an val

where **T** - is the retail turnover;

A an val - is the average annual value of fixed assets.

The **average annual value of fixed assets** is determined by the formula

A an val = Cfa beg + C int input xN |12 - C ret output x (12-N) |12

where **Cfa beg** n is the cost of fixed assets at the beginning of the year, p.;

C int input - is the cost of introduced fixed assets, p.;

C ret output - is the cost of retiring fixed assets, p.;

N - is the number of months of operation of fixed assets.

The capital intensity **(C inten)** is the inverse of the return on capital, which shows the value of fixed assets for each ruble of sales:

C inten = A an val :| T

A positive trend is the annual decrease in capital intensity.

The fund profitability (**Fprof**) shows the amount of profit (**P**) attributable to each ruble of the value of fixed assets.

Fprof = P : A an val

The stock ratio (**Srat**)is determined by the ratio of the average annual cost of fixed assets to the average number of production personnel (**N pers**)of the organization per year (N pers).

Srat = A an val : N pers

For a general assessment of the effectiveness of the use of fixed assets, it is advisable to calculate the integral indicator (**I indic**) of the use of fixed assets

(the square root of the product of the return on capital profitability):

$$К_{инт} = \sqrt{Ф_{отд} \cdot Ф_{рент}}.$$

I indic = $\sqrt[2]{\text{Rfunds x Fprof}}$

If the analysis of the efficiency of the use of fixed assets showed that the return on capital has increased compared to the plan, but the capital intensity has not changed, this is a positive trend.

The increase in capital productivity leads to relative savings of fixed assets in total.

In addition to general indicators that characterize the efficiency of using the entire set of fixed assets, private indicators of the use of certain types of funds are used.

Thus, the use of commercial and industrial premises is characterized by the following indicators:

turnover per 1 m2 of total area, per 1 m2 of retail space; profit per 1 m2 of total area, per 1 m2 of retail space.

Indicators of the use of commercial equipment are

coefficients of the installation area of the pharmacy's sales area, coefficients of the use of installed equipment (coefficients of layout, multiplicity, capacity), etc.

The main directions for improving the use of fixed assets are:

o introduction of the latest technology and intensification of production processes;

o technical improvement and modernization of equipment;

o improving the structure of fixed assets by increasing the proportion of machinery and equipment;

o increasing the utilization rates of installed equipment;

o professional development of the company's employees.

5. Determining the need for fixed capital.

The formation of the need for fixed capital is associated with the main stages of the organization's development: the creation of a new enterprise; the expansion and reconstruction of an existing enterprise; the creation of new structural units of an existing enterprise.

The need for fixed assets is determined differentially by their types:

1. the passive part of fixed assets (buildings, structures, etc.);

2. The active part of fixed assets (equipment, tools, vehicles, etc.).

The initial data for calculating the need for fixed assets for the future period are:

 planned volume of trade turnover;

 capital intensity of fixed assets;

 the cost of certain types of fixed assets;

The cost of installing equipment and other mechanisms.

The total need for fixed assets (**TN fa**) of the organization for the planned year can be calculated using the formula

TN fa = Tplan * C int plan;

where the **T plan** - is the planned volume of trade turnover;

C int plan — the capital intensity of fixed assets of the planned year.

The capital intensity for the planned year can be calculated using the formula

C int plan = C int * K

where **C int** is the capital intensity of fixed assets of the reporting year;

K is the coefficient characterizing the average annual change in capital intensity in a dynamic series, determined by the formula

$$K=\sqrt[n-1]{\Delta \mathbf{Cval}\ \text{fa} : \Delta \mathbf{T}}$$

where **n** - is the number of years in dynamics;

ΔCval fa is the increase in the value of fixed assets in the reporting year compared to the first year;

ΔT is the increase in turnover in the reporting year compared to the first year.

The total need for fixed assets is the basis for calculating their growth for the future period, taking into account the use of additional information (availability of fixed assets at the beginning of the planned period and their expected disposal in the planned period due to their physical and moral deterioration).

The calculation of the increase in fixed assets **(ΔCfa**) at the end of the planned period can be carried out according to the formula

$$\Delta Cfa = Need\ fa - Avail\ fa + E\ ret\ phys + E\ ret\ moral,$$

Where

Need fa is the need for fixed assets for the planned period;

Avail fa is the availability of fixed assets at the beginning of the planned period;

E ret phys, **E ret moral** - is the expected retirement of fixed assets in the planned period due to their physical and moral deterioration, respectively.

Independent work:

1. List the types of resources in the pharmacy:

Pharmacy organization resources

2. Shelf life coefficient OF -
_____
_____

3. The retirement ratio of -
_____
_____
_____

4. The coefficient of admission of -
_____
_____
_____

5. The growth rate of - _____
_____
_____

6. Capital intensity -
_____
_____
_____

7. Return on funds -
_____
_____
_____

8. Stock ratio -
_____
_____
_____

Task 1. Based on conditional data on the balance of availability and movement of fixed assets, thousand rubles:

Availability at the beginning of the year 9,870

Received in the reporting year: a total of 2,310 , including 800 new ones

Retired in the reporting year: a total of 555 , including 333 liquidated

Availability at the end of the year 11,625

Availability on January 1 of the year following

the reporting year, net of depreciation , 9,183 1.

Determine:

a) the coefficient of renewal (Cren)

b) the coefficiency of access (Cacc) or Admission rate

c) the coefficient of disposal (Cdis),or Retirement ratio

d) the coefficiency of growth (Cgro) of fixed assets or Growth coefficient

Task 2. Define:

a) return on funds and capital intensity in the base and reporting periods;

b) absolute data changes and calculated values;

c) relative changes in the studied values (growth rates) — based on data on the release of a medicinal product and the cost of fixed assets of a pharmaceutical enterprise for two periods:

Indicator, thousand r.	Base period	Reporting period
	The volume of production of the drug "X"	
in comparable prices	**22 000**	**25 000**
The average annual cost		
of fixed assets	**11 000**	**20 000**

Carry out a factor analysis, compare the data on the increase in the volume of commercial products and the increase in fixed assets and draw the appropriate conclusions.