Morbidity of the population

The morbidity is an essential component of a comprehensive assessment of public health

The incidence (morbidity) describes the prevalence, the structure and dynamics of disease registered in the population as a whole or in its individual groups (age, gender, regional, professional, etc.).

Morbidity is one of the criteria for evaluating the work of the doctor, medical organization, health authority

Morbidity can be calculated (in point of 100, 1000, 10000, 100000 people

In health care morbidity data are used:

- To justify the need for different types of medical aid, personnel, hospital beds
- For the planning of specific therapeutic and preventive measures and targeted prevention programs
- To evaluate the medical organization activity (analysis of the volumes, quality and efficiency), including economic activity
- To organize and conduct social and hygienic monitoring of diseases.

The methods of studying morbidity:

- **According to citizens appeals in medical organization (clinic, hospital)**
- **According to the medical examination**
- **According to the data on causes of death (pathological, forensic investigations)**
- **According to the survey (opinion poll that allows you to explore the subjective attitude of patients to their health)**

Method of morbidity study according to the citizens appeals (negotiability)

- *It is the main source of information about acute diseases and acute exacerbation of chronic diseases with which the patient is turned to the medical organization in the current year*

Positive aspects of the method:

- It is the main source of information about acute diseases and acute exacerbation of chronic diseases

- This method is economically cheaper than other

- The ability to compare the information with the data obtained from the use of other methods for the concrete diseases

Method of morbidity study according to the citizens appeals. Disadvantages.

- Some people do not seek medical care because of unexpressed disease symptoms, the level of culture, low medical activity of the population and so on
- Different levels of medical care at the individual administrative areas (access to health care, the level of qualifications of doctors, diagnostic capabilities of medical providers and others.)
- Different quality levels of statistical accounting medical diagnoses in medical institutions

Accounting incidence according negotiability

- Is conducted on the basis of statistical processing registration form "Coupon of ambulatory patient" (form number 025 / y)
- "Coupon of ambulatory patient" is filled with medical organizations engaged in outpatient care and using a system of accounting for the finished case of outpatient care
- "Coupon of ambulatory patient" and its automated processing allow for: the collection of statistical information on the incidence, accounting and management of insurance CHI (compulsory health insurance).

Method of morbidity study according to medical examinations

- *It provides the most complete information about all available at the time of inspection of chronic and acute diseases with clinical manifestations, as well as diseases that occur hidden, latent (in subklinicheskih forms)*

Positive aspects of the method:

- **It allows you to identify the early stages of diseases, about which people do not seek medical care (hidden)**

- **It allows you to identify purposefully the individual pathological conditions and diseases (tuberculosis, hypertension, and others.)**

Disadvantages (weaknesses) of morbidity study according to medical examinations

- **The quality and efficiency of the method depends on the economic possibilities, material and technical base of medical organizations**

- **It is not possible to provide the inspection of all population groups by highly qualified specialists narrow profile in the conditions of modern Russian Health**

- **In order to be effective medical examination is needed of its clear organization, attraction of highly skilled experts, the use of modern diagnostic equipment**

Method of morbidity study according to data on causes of death

- **Represents information about the disease which caused the death and was not treated in medical institutions during the lifetime of the patient**
- **It reflects the current level of medical science development**
- **It reflects the final result of pathological conditions which can not be affected (influenced)**
- **The morbidity level and it's reasons depend on the quality of the diagnosis of the death causes (training of doctors, the state of morbid anatomy service, religious beliefs and traditions of the population)**

The main indicators used for statistical analysis of morbidity:

- Primary morbidity (the actual incidence)

- The overall morbidity ("prevalence", "frequency of diseases", " morbidness")

- The incidence identified in medical examinations ("pathological destruction")

- Causes of death are also indicators of morbidity

Primary morbidity (the actual incidence)

This is frequency of new diseases, that have not been previously recorded. These diseases were first detected in the population in a given calendar year.

The indicator of primary morbidity:

$$\frac{\text{the number of newly emerged diseases} \times 1000}{\text{average annual population}}$$

The level of primary morbidity in Russia is 900-950 per 1000 population

The overall morbidity (morbidness, prevalence)

This is the frequency of all existing diseases in the population. It includes diseases, first identified in a given calendar year, as well as diseases, registered in previous years, when the patient again sought medical care in a given year

Index of general (overall) morbidity:

$$\frac{\text{the number of existing diseases in the population for the year}}{\text{average annual population}} \times 1000$$

The level of general morbidity in Russia is 1800-1900 per 1000 population

The incidence identified in medical examinations ("pathological destruction")

These are diseases found during preventive medical examinations and registered on a given date

The index of morbidity diagnosed during medical examinations:

the number of diseases and premorbid conditions
identified during the medical examination   × 100 (1000)
the number of examined persons

Morbidity according to the cause of death

- **The frequency of diseases with definite causes of death (diagnosis), established by medical staff when a patient was alive, or at postmortem examination, or during a forensic medical examination of the population**

    Incidence rates according to cause of death:

- **The structure of death causes (%), the mortality of the population (in general, for specific diseases)**

Some kinds of diseases subject to special study

- **Hospital morbidity (hospitalized)**

- **Infectious (epidemic) morbidity**

- **Non-epidemic incidence of diseases that have been identified by doctors of dispensaries and clinics specialized rooms (services)**

- **Professional morbidity**

- **Incidence with temporary disability**

Registration records (documents) for the study of certain types of disease:

- «Statistical card of the left out from permanent establishment» (form 066/y)
- «Emergency notification of infectious disease, food, acute professional poisoning, an unusual reaction to vaccination» (form 058 / o)
- «Notice of patients with newly diagnosed in the life of active tuberculosis, venereal disease, Trichophyton, Microsporum, crusted ringworm, scabies, trachoma, mental illness» (form 089 / y)
- «Notification of patients with newly diagnosed in the lives of cancer or other malignant neoplasms "(form 090 / y)
- Disability leaf

Level and trends of morbidity may be caused by:

- **Risk factors for disease occurrence**

- **Factors affecting the availability and stages of care, influencing quality of disease diagnosis (skill level of doctors, the provision of diagnostic equipment, etc.)**

- **Changing the composition of the population by age, sex and other social factors**

- **Organization of preventive work**

The International Statistical Classification
of Diseases and Related Health Problems (ICD)

- **Is the international «standard diagnostic tool for epidemiology, health management and clinical purposes»**
- **It is a system of disease groups and disease states, reflecting the current stage of development of medical science**
- **ICD is reviewed and approved by WHO**
- **Currently, ICD-10 (1995) remain in force**
- **Includes 21 class of diseases, conditions and external causes of diseases and also the factors**

- **The purpose of the ICD - to create the conditions for systematic recording, analysis, interpretation and comparison of mortality and morbidity, obtained in different countries or areas and at different times**
- **ICD is used to translate the verbal formulation of disease diagnoses and other problems associated with health in the alphanumeric codes that provide easy storage, retrieval and analysis of data**