Informative providing of epidemiologys and clinical researches. Role of official statistics in the analysis of population health, its advantages and failings. European base «Health for all». Software of statistical researches.

1. Hierarchical LEVELS OF management and their tasks in modern CONDITIONs.

The management is the most ancient feature of human activity. Elders, leaders, managed at the beginning. Managed, reeling on experience of previous generations or on a precedent: it was so before them, they did so also. It is the so called empiric management. It happens also presently. Except of experience, an explorer is relies on intuition, foresight and others like that.

The last decades exposed a sharp necessity of the scientific management. It is conditioned, in particular in health care, by the scope of problems, necessity of complex approach to their decision, by accumulation of enormous human and material capitals.

There are many definitions of the science of management, what is the evidence of its youth. We will point one of them: “Management is the organization and realization of purposeful actions” (V. rapeznikov).

The system of knowledge’s of the science of management is made of such basic sections: theory, organization, culture, methods, and technique.

The general theory of the systems, systems approach and systems analysis, is the theoretical base of management. According to the general theory of the systems the whole surrounding world consists of the various systems and non system atical formations which are in permanent co-operation.

The systems are divided after many characteristics. Bat there are some general: every system consists of subsystems, each of them is the system in relation to its constituents; every system can be dismembered to such elements or components that are not the system already. A health care, as a system, after a causal characteristics can be divided into two subsystems: Medicare and other organizations and departments which quarantee the people’s of health. Each of these subsystems is the system in relation to its component parts. At the same time a separate medical employee, a bed in permanent establishment, a medical instrument are those elements which are not the systems already.

Consequently, the system is the united integral formation, that consists of the totality of elements which co-operate constantly, has its inner structure, possesses integral system qualities, has internal and external connections, and is functioning for the sake of achievement of the certain aim. The orientation of all its elements (components) exactly on the decision of the definite purpose task is the basic characteristic of the system.

It is possible to separate three basic hierarchical levels of health care managements in Ukraine: basic, areal and state.

The basic seizes a rural administrative district and city.

In rural administrative districts it is represented by the general director of territorial association (former chief doctor of the district). At the same time he is the chief doctor of the central district hospital. He executes the functions fixed on the district state administration in the branch of health care of population. He relies on the administrative subsystem of the central district hospital in his work.

In towns the basic level of the health care management is some what another are included onto the city state administrations here. The managements of health care with a chied at the head . There is

the group of managers, the basis of which are maked of so-called main specialists (internist, surgeon, pediatrician, and others like that). The management also relies the administrative structures of city hospitals.

Such functions in the branch of health care are laid on the state administrations: management and elaboration of development prognoses of health care establishments network; organization of Medicare for population, organization of control after the sanitary state of environment with inhibition of rules of sanitary protection, realization of measures on prevention of infectious diseases; control of the giving of privileges to the mothers and children, improvement of life conditions of the families with many children; control of the inhibition of labor rules, technique of safety, production sanitation, ecological demands al the enterprises, in organizations and establishments. The basic level is fundamental in the system of Medicare. Its primary and secondary links are concentrated here. They are structurally united. As it was mentioned before, 90 % of ambulatory-policlinic and 80 % of stationary help is concentrated here. Of quality and of efficiency management at this level practically depend the results of the activity of the who'll system.

Administrative activity of basic level is directed for development of the separate specialized types of Medicare, the chief specialist is responsible for each of them(usually, it is someone on the staff, who is working al management, or out staff, as a rule, the chief doctor of a corresponding specialized establishment of the city.

The management health care of at the basic level suffers from many defects: firstly, it is not engaged in the special problems of healthy population, because it does not have the proper information and plenary powers for this purpose; secondly, it is not engaged in the economic problems of Medicare because of the lack of the proper specialists, lack of information and others like that; thirdly, the basic method of management is an administratively-command.

Realization of the above-mentioned bases of organization of health care in the market conditions is impossible without the substantial super session of the administrative activity at the basic level.

Must be secured first of all. The questions of organization and giving of the specialized Medicare will be the function of medical association that unites medical establishments. Medical establishment by analogy with an enterprise, gets rights to solve all the problems independently within the limits of existing legislation. It sets its staff-organizational structure, proves economic bases of its activity, develops medical services in accordance with the necessity.

In the case of transition to medical insurance between the state organ of health care management and medical association, the intermediate branch - an insurance company, will be created, which will assume the functions of assignation of medical association and control after the quality and efficiency of that help which it gives. It provides the public control after the activity of medical establishments.

Primary and secondary medical help are strictly differentiated. We must distinguish the basic or primary link - domestic medicine. It has to provide to 90 % of all Medicare and it is based on bases of patients' free choice of the family doctor. It will create necessary (first of all economic) pre-conditions for the improvement of the work of the whole system of Medicare. Family medicine is assigned due to a budget and is directly subjected to the health care management of the local state administration.

The areal (regional) level of health care management at bottom not much differs the basic one. The leading figures of regional health care managements are also chief specialists.

The regional health managements in their work rely on the administrative subsystems of medical establishments which provide tertiary Medicare. Status of main supernumerary specialists is given

to the chief doctors of the regional specialized dispensaries and managers of the specialized separations of regional hospitals. Regular and supernumerary specialists carry out the direct hard control through the city and district specialists after development of the separate specialized services in the region.

The structure and functions of regional health care management are to be substantially changed in modern conditions. Its basic task - strategy of the development of health care of the land, region, decision, in place of narrow medical questions, socially-medical and economic problems in the branch of health care. Following the providing of legislation fulfillment in the branch of health care, such a problem is forming, development and realization of the special purpose complex programs, directed on the improvement of health of the separate social stratums of the population, filling of the socio-economic activity of the land administration by such normative positions which will promote the improvement of people health. At must be place of chief specialists here. The specialists in the franch of social medicine, organization and management of health care, managers, Lawyers, economists and specialists in the branch of the informative providing.

Weak jurisdiction of specialists in the branch of social medicine, management, economy of health and medical statistics care is the mutual defect of the basic and regional (areal) levels of health care management. Today it is limited to the not quite clear understanding of the difference between intensive and extensive indexes.

The Ministry of health care of Supreme Council of Ukraine represents the state level of health care management. Instead of obedient performers and interpreters of the soviet directive and normative acts they became the creators of independent policy in the branch of health care.

Ukraine needs an urgent development of several of laws at health care. It is the basic task of testate level of management in modern time.

Special purpose complex programs which have the national value are to be also developed and be carried out here.

The ministry of health care has to realize the cardinal changes in the medical personnel training.

The management of medical science is also provided at the state level. Scientific priorities which appear (come out) from the problems of health and health care of population of Ukraine are set together with the Academy of medical sciences. The special attention is spared to the development of social medicine problems, organization, management and economy of health care. The history of Ukrainian medicine as a branch of European medicine is reproduced, without what Ukrainian medicine and health care will not take deserving place in the world science, the Ukrainian medical encyclopedia is created.

Ukraine sets the equal and mutually beneficial contacts with an outer world, becomes the full-fledged member of WHPO.

Medically-statistical and informative service are formed at the state level. From the one side, it takes into account interests of the informative providing of all the levels of health management, from the other – it becomes a foundation for a wide development of researches in the branch of social medicine, organization and health care management.

2. INFORMATIVE MAINTENANCE OF HEALTH CARE MANAGEMENT

At the all levels of health care management objective information is failing now. It considerably complicates, and sometimes makes impossible the process of reorganization of health care. At the same time, everybody knows that medical workers spend the main part of working hours (more than

25 %) for writing work, that is on the collection of information. in the recent years of existence of soviet health care 269 registration and more than 150 current statistical forms were operate. What is the reason of this paradox? They are many, bat there are the main.

. nt once said: that numbers do not command the world, but they show, as the world is managed. The informative providing in soviet conditions served the hard hyper centralized administratively-command control system. Current forms which were filled at the basic level, were in an unchanged (lift up) to that of the Union.

Meanwhile, the management science asserts that the model of the informative providing must have the appearance of pyramid. Its wide foundation has to serve to a basic level, where the basic extent (range) of Medicare to the people is provided. The higher level of management, is the less information has to be. And it has to be, but the more integral and complex in its character. Life required instruction from masses to collect information, which according to the working official, was considered illegal. It was constantly forbidden, but it always existed. At the same time a lot of superfluous or unnecessary information which settled in bureaucratic cabinets like a dead groom rose to the top.

Weak knowledge of leaders of all grades on the questions of medical statistics and informatics, social medicine and health care management made them to follow aspiration to collect them as more as possible, may be, they will be needed during the statistical and other data capture.

Strange. But in the period of unrestrained specialization of Medicare the only service, the growth of which restrained, was the statistical one. The thing is. That the employees of this service corresponded to the administrative vehicle which in the conditions of the administratively command system constantly grew up. There were attempts to limit this growth, that began, and quite often ended with statistical service. That's why the statistical and other data capture was transposed on doctors and middle medical workers, that caused their right complaining.

But the principal reason of disparity between the enormous volume of informative material, that was gathering, and the short volume of its analysis was the orientation on the continuous method of collection of this material. It is known, that ordinary at every in habitant annually registered one disease. Fourth part of in habitants is hospitalized in permanent establishments. More than half of the in habitants was on a clinical account. In the result it is million and million registration documents. Each of these documents took into account the considerable list of information necessary for estimation of diagnostics and treatment of patient. To process and analyze them was impossible.

All these defects of the informative providing of health care remain until now.

At the same time, information extremely necessary for the management was absent in registration and current forms. Firstly, this is the information concerned with the social conditionality of health, secondly, information. That enabled to estimate economic efficiency of Medicare, beginning from the determination of cost of medical services. Single scientific researches on these themes could not close enormous informative blanks. Expert estimations were offered, but they did not solve the problem, because they have subjective character enable comparison, considerably multiply the volume of writing work etc.

The informative providing of health care management has to be radically reconstructed.

First of all, it concerns the basic level and not only because the basic volume of Medicare is given here. On the basis of information, that is created here, demands of all other levels of management are satisfied.

Registration documents are the entrance into the system of the informative providing at the basic level. Primary of them are the individual card of out-patient and history of in-patient. Of course, these documents have to be filled by doctors for same time, until machine data carriers will not get general distribution. In practice of the informative providing is used, however, not these ones, but so called intermediate registration documents which are created on their basis. Basic ones were in ambulatory-policlinic establishments statistical coupon for registration of final (definitive) diagnoses, check card of clinical supervision, card of prophylactic examination and others like that. From 1989 all these documents were united in to one, that has got the name "coupon of ambulatory patient". In permanent establishments during the last decades the card of leave (left) from permanent establishment was a basic intermediate statistical form. For registration of death rate the medical certificate of death is used.

These documents enable to define the structure of the occurrences and their frequency among all the population. But it is impossible to define a structure and frequency of these occurrences among the social stratums of population. Meanwhile for influencing on health information about prevalence of diseases and death rate exactly among the age, professional and social layers of population is necessary.

This work is problematical, but it becomes the real off the condition of usage of selective method of collection and analysis of documents. According to the law of large numbers the size of selection depends on prevalence of factors which are taken for the analysis. At the basic level it is expedient to use such a list of diseases: tuberculosis, malignant new formations, benign new formations, diseases of the endocrine system, disorders of feed, substances exchange, including saccharine diabetes, diseases of the nervous system, glaucoma, diseases of the system of blood circulation, including rheumatism, hypertensive diseases, ischemic cardiac disease (ICD), cardiac angina, cerebra-vascular diseases, diseases of organs of breathing, including pneumonia, chronic bronchitis and emphysema, bronchial asthma, diseases of organs of digestion, including ulcerous diseases and gastritis, diseases of the urine-sex system, including nephrite, diseases of woman privy parts, bony-muscular system, traumas and poisonings and such age groups (0-14, 15-19, 20-44, 45-64 and 65 years and more).

Social and professional stratums are indicated in the card of in habitant (the card of in habitant of rural district is pointed). According to prevalence of these factors, which are taken for the analysis, to receive the reliable information the number of 4 types of persons is a minimum sample. The combined method of selection is the most effective one. In practice it looks like this: the population of district divides into rural medical region and district center. The number of people that were get in to the selection from every area and district center is set Proportionally to the quantity. Persons with the last name on certain letters are taken: " ", "L" etc. For each of the selected the card of habitant is filled. These cards are entered in to COMPUTER or a separate card index is led (in the case of hand processing). The coupons of ambulatory patient and cards of drop-out from permanent establishment of persons that were got into the selection, are united into the card of habitant and are analyzed. It enables to obtain all necessary information. It is used by medical establishment for preparation of decisions at the level of local self-government organs, for the current and perspective plans of health care development of district, for the proveness of norms of medical insurance, for determination of medical services cost. The name of medical services has to be pointed in the intermediate registration document. For this purpose in every medical establishment their list has to be work out and the has to be cost calculated in according to the methodics and the cost has to be calculated according to the methodics.

Transition to the mainly selective method of collection and analysis of statistical documents in some cases does not eliminate saving of social analysis. First of all it concerns determination of quality and efficiency of the work of medical employee for the short interval of time (month, quarter) with the purpose of economic stimulation of labour, registrations of some rare diseases (infectious, venereal and others like that).

In the system of the informative providing of health care management collec tion, storage and treatment of registration documents, is a process. In the modern time the process has to be automated.

Criteria, analytical tables, dependences, regularities, which came out from the analysis of statistical and other material, are the output of the system of the informative providing.

In practice, of health care management informative material suffers by superficiality, absence of modern methods of analysis at all levels. In particular, authenticity of indexes which are got with the use of small numbers of supervisions is not determined (25 and less); the dynamic analysis is limited to comparison of contiguous years or their pieces; intercommunication of the occurrences is not practically determined, other economic-mathematical methods are not used (factor analysis, methods of pattern, operations analysis recognition, and others like that).

3. AUTOMATION OF HEALTH CARE MANAGEMENT

Automation is a mean, which provide high-quality implementation of the functions of management.

We may distinguish three types of application of the modern computing engineering – COMPUTER – in the management.

First of them, the simplest – assumes the fulfillment of certain calculable functions with the help of COMPUTER. In this case COMPUTER is a kind of automatic arithmometer, and computer center, where it stands and is exploited – the factory of the automated counting. The calculation of wages, writing of accounting or statistical reports is the example of such application. A such application of COMPUTER does not lead the system and methods of its activity to structural reorganization. Preparatory work consists in software development, entering of information in the computer center. Although the application of COMPUTER is the most simple it gives a rapid effect.

The second type of application of COMPUTER is connected with introduction into the management the automated informative systems (S), with the help of which the part of information is processed, by COMPUTER according to the set programs and is used on S. They are divided into such categories:

- Informative - system (ISS) orientated on the information searching;

- Informative - inquiry system (IIS) – after the results of searching calculates the value of arithmetic functions;

- Informatively-logical system (ILS) – after the results of searching calculates the value of logical functions;

- Informatively-identification system (ILS1) – after the results of searching solves the task of recognition.

In all the cases the management rids of conservative work of information processing, gets additional time to accept the decisions. S keeps and accumulates information and gives out it according to the requirements of personnel management. S carries out a substantial auxiliary role in the management, but the very process of accepting of decisions does not affect.

The third type of application of COMPUTER is the actually automated control systems (ACS). Joint work of man and machine, where they appear as equal partners is their characteristic sign. Machine does not only processes the information but also makes decision, although the last word

remains after man. To ACS can be given such determination: this is man and machine control system, that provides achievement of the aims put before the system and maximally uses possibilities of its basic components is man and machine.

In the health care management we have to connect all three types of usage of COMPUTERS depending on the tasks and present conditions for their use.

The center of collection, processing of information and acceptance of decisions (CCPI-AD) it is the certain system of collection of information, computing facilities for its storage, processing and analysis (COMPUTER of different types) and people who make final decisions (workers of management apparatus). These centers are formed in central district and city hospitals.

The improvement of people health is the primary aim of the management system. Automatization has to give objective estimation to the health, demographic processes, morbidity, etc.

The indexes of health are connected with factors that condition it (social, ecological, biological) and by measures of health care – prophylactic and special medical. Economic efficiency of the measures directed on the improvement of health is also estimated , namely cost of medical services according to the accepted norms and standards.

Automatization of the management system of health care on the basic level as well as at the others, has to take into account such peculiarities: firstly, it is based on the operating systems, in which processing of information until now was held by hand, secondly, it discovers such to information and management function, which must be analyzed with the help of COMPUTER, thirdly, carries out transition of the hand system in automated gradually, automatizing the fulfillment of separate functions. Introduction of automatization of the separate functional tasks must be carried out in such a way, that it could, provide their union into the one automated complex (graph.1).

The most important tasks of the management system at the basic level are the follows:

- determination of volume, quality and efficiency of Medicare, that is given by every medical worker and structural subdivision;

- determination of reasons of conditionality of health, foremost its state among separate social, professional and other stratums;

- determination of necessity in Medicare and its economic efficiency.

Automation of tasks and functions passes through such stages. Technical tasks created first of all. Concrete aims which is achieved with introduction of COMPUTER, and stages of works, are herein formulated have. A draft project is farther created. There they point out the was of achievement of aims, that are put in the technical tasks, or conception of automation. After draft technical project is created. On this stage hardwires for automation are chosen finally, the formal raising of solvable tasks is given, algorithms (logical execution and program of their decision sequence) instructions for work of personnel, documents for automation, calculation of economic efficiency of automation are developed. The structure of the system and methods of its work is finally chosen. After it a detail project and its introduction are developed.

Automation of some functions of management at the basic level can be represented like this.

Management of morbidity of population, is heard to attain in the conditions to ACS. The factors that influence on it, are not studied properly co-ordination of actions of not only medical establishments but also other organizations and departments, of which the health of people depends on is absent.

For the improvement of the processing of this important task management must be oriented on S for a while.

The S Functioning is going in such a way. In medical establishments – rural medical areas (RMA) and central district hospital (CDH) intermediate data carriers are gathered coupon of ambulatory patient (CAP) and card of habitant (CH) – on for all the habitants that are included into selective aggregate. They are concentrated in CCP-AD, that is formed on the base of CDH. Processing and analysis of both data carriers results in determination of morbidity of different stratums of populous ness (DSP) – social, professional, age. The workers of medical establishments and other organizations and departments which co-ordinate their actions in order to decline the morbidity get this information. Except of this, CCP-AD makes current forms (CF) which are givens to the higher hierarchical levels of health care managements.

Management of quality and efficiency of Medicare, which is given by a medical worker and structural subdivision, is possible to carry out in the mode of ACS. Its functioning is going on like this. The doctors of consultative-diagnostic center and permanent establishment fill CAP and card of drop-out from permanent establishment (CDE) for every patient. These documents are also received at CCP -AD. They will be processed according to the accepted algorithms and programs here. An algorithm allows to estimate the work of a doctor and structural subdivision of any type. Ordinary indexes within the limits of structural subdivision (separation) are taken as normative, at the level „patient-doctor", the best indexes or such, that are proved in an expert way, - at the level of separation. The range of doctors marks (structural subdivisions) is set. Those, who have marks higher than an ordinary level, can be encouraged materially. The greater size of material encouragement proportional to the distance from an ordinary level.

So, the management, administrative activity, is an element and component part of the production relations conditioned by social character of labour. It is the difficult and specific type of activity, impossible for successful fulfillment without special training (preparation), use of the simple charts only, devised (methods) and rules of work.

European base «Health for all».

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HFA-DB is updated biannually and contains about 600 indicators for the 53 European WHO Member States. The indicators cover:

- basic demographics;
- health status (mortality, morbidity, maternal health and child health);
- health determinants (such as lifestyle and environment)
- health care (resources and utilization).

HFA-DB allows country and intercountry analyses to be displayed as charts, curves or maps, which can be exported free of charge to other software programs. The data come from:

- an extensive network of country experts working in statistical, monitoring and surveillance units in ministries;
- WHO/Europe's technical programmes; and
- partner organizations such as the Organisation for Economic Co-operation and Development.

HFA-DB can be used online or downloaded to be installed in its entirety on a computer.

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