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REGIONAL PATHOLOGIC ANATOMY CENTER AS THE FUNCTIONAL ORGANIZATION MODEL OF PATHOLOGIC ANATOMY SERVICE IN UKRAINE

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Summary: The problematic tendencies of development of modern PAS in Ukraine prove in modern conditions the centralized model of PAS regulation is unable to completely solve the existing problems, which had inhibited the development of the service as a whole for years. It is proposed to create the structural model of PAS as a specific association of pathologic anatomy regional centers. In this case specifically the RPAC act as the basic component of PAS in Ukraine in the conditions of its decentralization. An attempt was made to determine the peculiarities of organization-functional implementation of RPAC as a rather perspective system based on decentralization of PAS in Ukraine. Basing on the position of the existing organization of system of provision of pathologic anatomy services it is suggested that each region would have its own center, it is therefore expedient to build the centers in the regions of Ukraine that lack pathologic anatomy bureaus and the regions that have a significant workload for the PAS institutions. Based on experts' evaluations, the practical realization of the optimistic scenario of the perspective system of RPAC would allow to increase the quality level of provision of the pathologic anatomy services and their availability. Considering the financial, staffing and material-technical capabilities of national system of health care, the structure and functioning of perspective system of RPAC in Ukraine should be organized based not just on state form of property and budget funding, but also introduction of private-state partnership.

Key Words: pathologic anatomy, reform of the branch, regional pathologic anatomy center.

The reform of health care is an activity that is related to changes in the policy and the health care institutions that provide it. The results of the reforms are affected by factors like political reforms, economic factors, cultural traditions [1]. According to the decree of the Ministry of Ukraine from 30.11.2016p. №932, the medical reform, besides decentralization, includes the creation of new territorial objects – hospital districts, which do not coincide with the boundaries of regions and administrative districts.

The decentralized system opens wide possibilities for development of local initiative, facilitates the performing of various experiments, and takes into much better consideration the local features. Proposals as to creation of innovative pathomorphology, as part of the strategy of building of new health care system in Ukraine, should be viewed in the aspect of closest and distant perspectives.

Pathologic anatomy service (PAS) is also going to be included in the process of reforming of medicine in Ukraine. The general question of foundation, development and implementation of organization of PAS model has an all-around complex character [2-5] and puts it on correspondent systematized level of understanding which, in turn, views a significant specter of studies from the position of understanding of the structural model of PAS.

Considering the performed analysis [6], the perspectiveness of decentralized tune-up of state-private partnership in PAS activities is significantly outlined, which in turn may remove the problems that were discovered in PAS activities.

The highest indicators of PAS services are currently observed in Central, Western and Black Sea Coast social-economic macroregions [3]. At the same time the problems of current workload of the PAS institutions considering the performance of pathologic anatomy studies are clearly seen in these regions of Ukraine. Considering the social-economic and geographic determinants of social-economic macroregions of Ukraine, it is currently expedient to build and implement additional PAS institution within the borders of the following regions.

Considering the tendency of existence of pathologic anatomy bureaus within the regional borders, it is possible to speak of the presence of adequate resource-research base within the corresponding regions and of perspectiveness of regional distribution of PAS in terms of implementing decentralization.

Materials and methods. Methods of modeling and system approach were used in the study.

Multidimensional ordinary logistics model with randomized units of managerial trends in the regulation of PAS institutions was used in the complex specter of estimating the validity.

The next step was establishing reasoning of main functions and organization structure using the systemic approach (with the following aspects: systemic-component, systemic-functional, systemic-structural, systemic-resource, systemic-communicational, systemic-integrational, systemic-historic).

Goal of the study: reasoning of the experiency, estimation of strong and weak sides of the new functional-organizational model of pathologic anatomy service in Ukraine – the system of pathologic anatomy centers.

Taking into consideration the existing problematic tendencies of development of modern PAS of Ukraine, in current conditions the centralized model of regulation of PAS cannot completely solve the existing problems which had stalled the development of the service as a whole for years. This position manifests itself in technological-resource-research provision of the service, which in many cases resulted in underfunding of PAS institutions. We have justified the formation of PAS depending on actual capabilities of the units (institution), with division into three levels, separating the chairs of pathomorphology/pathologic anatomy with their laboratories and pathologic anatomy departments of departmental institutions (because of the lack of data about their resource provision and actual capabilities). The developed structure of PAS includes corresponding tables of equipment, lists of necessary processes, rights and authorities.

Considering the current importance of PAS institutions on regional level, it is expedient to introduce a model that would be based on decentralization of PAS institutions regulation withing the macroregional borders.

Based on the position of existing system of providing pathologic anatomy services, it is suggested that each region should have its own center; therefore it is expedient to build the centers in the regions of Ukraine where pathologic institutions are absent, or where they are experiencing considerable workload. It is suggested to create a structural model of PAS as a specific association of regional pathologic anatomic centers (RPAC). In this case it is specifically the RPAC that take the role of basic component of PAS of Ukraine within the situation of implementing decentralization.

Estimation of validity of expert evaluation of effectiveness of introduction of new forms of centralization and optimization of pathomorphologic studies is directly based on corresponding pithiness of structural dependancies, specifically the responses and characteristics of experds, their mediation with design elements. In the complex specter of estimation of validity was used a multidimensional ordinary logistics model with randomized units of managerial trends in the regulation of PAS institutions.

According to the data of experts' evaluations, the practical realization of optimistic scenario (12 centers of PAS studies would be persent in each macroregional center) of perspective PAS system would provide:

- 1) increased level of provision of PAS services;
- 2) increased quality of performance of pathohistologic studies;
- 3) increased effectiveness of quality control of lifetime diagnostics and treatment;
- 4) increased safety level of performance of pathohostologic studies and autopsies;
- 5) increased availability of high-tech methods (imunnohistechemical, genetic studies).

The system-goal aspect had scientifically determined and interconnected

the goals of execution of this direction of scientific research, which reveals all the components of pathologic anatomy studies center, directions of their activity, interactions and interconnections, resources that ensured their existence and the stages of historic development of PASC in Ukraine and worldwide.

System-functional aspects of the creation of pathologic anatomy studies center should be considered on micro- (institution), meso- (region) and macrolevels (state).

On viewing the system-functional aspect of regulating subject, we should note that it is necessary to determine the vertical of administrative and functional regulation with determination of corresponding regulating organs (for example, MHC, etc) and non-staff specialists (Main non-staff expert of MSH of Ukraine on pathologic anatomy, main pathologic anatomist of the region), who determine the strategy of development of the service.

Based on suggestion of budget funding and private investments into the program of development of the system of study centers of PAS around \$120 millions, the optimistic prognosis was the creation of 12 regional centers in administrative centers of the regions. The realistic and pessimistic prognoses were based on the funding level of \$12 millions for each suggested center.

For each prognosis we estimated several variants of building of the centers in selected macroregions, taking into consideration the medical-social determinants.

In the optimistic prognosis 12 RPAC are created, involving each administrative regional center that lack pathologic anatomy bureaus or have high workload of PAS institutions. In the realistic prognosis only 3 RPAC are formed, with a high workload observed in the PAS institutions. The pessimistic prognosis suggests that 1 RPAC is built and starts working. Considering the financial, staffing and material-technical capabilities of the national system of health care, the structure and functioning of perspective system of RPAC in Ukraine should be organized based not just on state ownership

form and budget funding, but also involving private-state partnership.

Despite the rather positive image, sadly, the acting law and normative acts are not sufficiently functional, in majority of cases they are declarative, containing internal contradictions and inconsistencies and require systemic refinement. As it is now, the experience of realization of projects based on state-private partnership in Ukraine is non-existent, and currently we can only speak of creating the pilot projects.

The main principles of location and structure of pathologic anatomy centers were determined and formulated:

1. Presence of multiprofile medical institution that provides specialized medical care with a wide spectrum of hi-tech medical services;
2. Presence of qualified specialists of medical and non-medical profile that would be involved into the work of pathologic anatomy center;
3. Creating the availability (social, economical, geographic etc) of the hi-tech diagnostics methods for the population;
4. Taking into consideration the specifics of morbidity of the population in the region. High indicators of morbidity and lethality related to malignant neoplasms compared to other regions.

The systemic-communicational aspect estimates the existing external connections related to realization of the goal, form and content of interaction between the pathologic anatomy studies center with the state regulating organs and departments in the system of organization and realization of pathohistologic studies. Systemic-communicational aspect revealed the ineffectiveness of the existing external connections and the base thereof, which was the unidirectional character of acting directive documents concerning the goal, form and content of the interactions of pathologic anatomy studies center with the state regulating organs and departments.

The systemic-structural aspect allowed to determine and solve the question of internal interactions between all the components – the system of pathologic anatomy studies center,

as well as bring to order the activity of each structural unit of the center and the coordination in reaching the final goal concerning the quality studies.

The interaction between the regulating apparatus on all the levels must be reached based on administrative, operative and functional types of connection (regulation).

Based on the abovementioned demands, we have developed and proposed the structure-functional model of RPAC. An RPAC joins the functions of provision of routine pathologic anatomy services (pathohistology studies, cytomorphology, autopsy), hi-tech methods (molecular-genetic studies, electronic microscopy, immunohistochemistry), and includes the department of quality control and standardization (in perspective with providing methodic help to departments/institutions of PAS, providing paid services of audit and preparation for certification and accreditation). The department of science and education would provide communication with departments of medical education (medical colleges, high education institutions and postgraduate education) as a base for education and practice in the educational process, retraining of staff, participation in development and implementation of new technologies, performing scientific studies. To solve the problem of "second opinion" and receive professional conclusions it is necessary to create a consultative expert department and to approve its functions and authority. Since performing pathohistologic studies in complex and controversial cases practically bears the features of expertise, it is expedient to propose the addition of pathohistologic studies to the list of expertises (including commissions), both ordered by medical institutions and appealed by citizens (as a paid service).

The systemic-resource aspect includes estimation of resources necessary for covering the demands of pathologic anatomy studies center to provide quality services to the patients with malignant neoplasms, based on the data received from systemic-component aspect of the system during the study of present resources.

The systemic-integrational aspect allowed to perform the internal conjoining of

the elements of pathologic anatomy studies center and the system of quality assurance though the exchange of information, data, programs, which predetermines the strategy of further development. The abovementioned system of quality assurance of the center integrates the demands of branch normative-legal regulation of the activities, as well as the demands and recommendations of a range of international standards (ISO 9001:2015; ISO 17025:2015; GMP etc.).

The strong sides of the described model can be considered the joining of regulating, clinical and logistics components. In addition to this the processes and models of final results, zones of responsibility and material-technical, staffing and financial resources are clearly determined and described.

Conclusions. An attempt was made to determine the peculiarities of organization-functional implementation of RPAC, as a rather perspective system created based on decentralization of PAS in Ukraine.

Based on the position of existing organization of system of providing of pathologic anatomy services it is considered that each region should have its own center, and it is expedient to build the centers in the regions of Ukraine lacking pathologic anatomy bureaus and in the regions where there is a significant workload for the PAS institutions.

Based on the data of expert evaluations, the practical realization of optimistic scenario of perspective system of RPAC will allow to increase the quality level of providing pathologic anatomy services and the availability of pathologic anatomy studies. Considering the financial, staffing and material-technical capabilities of national system of health care, the structure and functioning of perspective system of RPAC in Ukraine should be organized based not just on state form of property and budget funding, but also introduction of private-state partnership.

Perspectives of further studies: study the medical, economical and social effectiveness of the proposed system of pathologic anatomy regional centers in Ukraine.

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