THE ELECTONIC PUBLIC HEALTH ORGANIZATIONAL – FUNCTIONALLY MODEL AT THE REGIONAL LEVEL

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The Abstract: *The E(P)H organizational – functionally model in the Nizhny Novgorod region has been presented in the paper, the activities volumes estimation of the tele-medical centers has been also given there.*

The Key Words: *electronic (public) health (e-health), electronic service (e-cervice), tele-medical network center, regional (public) health.*

The electronic (public) health (EH) in the regions should be constructed, in accordance with the demographic – medically characteristics, specific features and the peculiarities of the territories, the safeguarding (public) health challenges, and to be included the evolutionary phase-by-phase development of the electronic services (ES) with the priority directions definition of the region (public) health development, the realization elaboration and implementation of the range complex of the regulatory-normatively, economic, personnel, and organizational activities, measures and arrangements [1].

So, the results of the carried out organizational experiment in the Nizhny Novgorod region have been shown, that the e-services further development should be considered the following: the rendering stages of the medical care, the services types facilitation, their volume planning, the interaction between the services and the (public) health care Institutions, as at the regional, well as at the federal levels. In the formation of the E(P)H organizational-functionally model, the following has been considered by us: the legal-normatively, economic, technological, personnel, methodological and the organizational support and its provision [2].

So, having taken into consideration the innovations complex character and its nature, the total cost and the activities, measures, and arrangements scope, the model realization and its implementation should be constructed, on the basis of the regional programs of the (public) health and the health care development, having contained the «informatization» special section in four stages, when each is practically lasted by 2-3 years (e.g. 12-24 months), and to be included the following sections of the work:

- the pilot Project realization and its further implementation to be created experimental segment tele-medical network service, on the basis of the medico-prophylactic Institution (MPI);

- the first stage organization of the electronic (public) health (EH) system, on the basis of the remote Central Regional Hospital (CRH);

- the second stage organization of the system (on the basis of the inter-regional specialized centers);

- the third stage organization of the system (e.g. the large-scale system implementation and the introduction in the region with all the CRH covering and the clinical hospitals).

So, the regional tele-medical network should have to be included the four levels (e.g. the scheme No. 1):

- the regional tele-medical center (TMC), on the basis of the leading multi-disciplinary clinical hospital with the reserved backup storage of the necessary medical data and the consultation center of the beyond-hospital monitoring;

- the disciplinary TMC, on the basis of the general multi-disciplinary and the specialized regional, municipal hospitals, specialized clinics and dispensaries, and also centers;

- the tele-medical rooms and surgeries, on the basis of the health care facilities (HCA), which are the inter-district and the inter-regional centers (e.g. traumatological, vascular, oncological and other disciplines and profiles);

- the tele-medical rooms and surgeries, on the basis of CRH.

The medical personnel is being trained by the tele-medical technologies, in order to be created the human resource capacity of the tele-medical structure. Such education is complemented by the necessary information, the introductory-informationally and awareness-raising activities, measures and arrangements such, as the theoretical and practical, scientific and practical conferences and exhibitions, the retreats, the regular columns and the constant headings on the tele-medicine in the regional medical journals and the publications.

As it has been shown, the carried out calculations by us, they have been conducted, on the basis of the expert estimates (e.g. the diagnosis making timeliness, and the adequate medical treatment assignment), the projected volume of the tele-medical consultations within the regional network system (e.g. from the regions' district) should be made up about 24 thousand tele-consultations per annual by the 20 disciplines and the profiles, that is accounted 18 thousand TMC working hours.

It had been calculated the hours number of the distance learning, which was amounted 13, 200 hours per annual (e.g. 60 hours per a day), having based on the doctors' number, having worked in the region's public health (12,900 people), the advanced training rise frequency periodicity, the hours proportion of the distance learning, including in the video-conferencing regime, which can be solved at the 10 terminals installations in the Medical Academy of the Nizhny Novgorod Region.

The working time budget of the regional TMC will be in the run up 16,500 hours per annual, with the tele-medical consultations register in the Federal specialized medical Institutions and its facilities (e.g. the distance diagnostics, and also the tele-educational events' direct conducting).

Thus, the total activities volume, per annual, will be amounted to about 5,000 hours for the profile and disciplinary TMC (e.g. on the basis of the regional and municipal clinical HCF). The total activities volume of the regional tele-medical room and its surgery of the first type of the tele-medicine-based CRH or the inter-district and inter-regional centers should be about 2,500 hours per annual, the medical study and its office of the second type (e.g. on the basis of the remote CRH, which are not equipped by the diagnostic AWPs) – 2,200 hours per annual.

The EH wide range use has its high level social-medically efficiency and economic feasibility, and this, moreover, is practically allowed to be solved the challenges by the quality and the population medical care availability improving at the up-to-date level, it is promoted to be strengthened help of the industry branch human capacity, the modern organizational technologies introduction.

TM-Center Type	Functions	Packaging
The regional tele-medical center (on the basis of the regional clinical hospital)	The development coordination of the regional tele-medical system, the interaction with the Federal centers; the tele-consultation, the remote diagnostics, the video-educational, videoconferencing events' conducting; the electronic public health services' development; educational and	The central bloc PACS-system, the hospital information system with the specialized sub-systems, the auditorium and the personal systems of the videoconferencing, the input instrument of the medical information, the consultative centers with the equipment for the data processing
The profile tele-medical center (on the basis of the regional and municipal HCF)	The interaction with the Federal centers; the tele-consultations, the remote diagnostics, the video-educational measures conducting, videoconferencing; electronic public health services development	AWPs PACS-systems, the auditorium and personal videoconferencing systems, the input instrument of the medical information, the equipment for the remote diagnostics
The tele-medi-cal room of the 1 type (on the basis of the large CRH and	The materials preparation and delayed and synchronous consultations conducting, the participation in the video-educational activities,	AWPs PACS-systems, the personal systems videoconferencing, the input instrument of the medi-cal information, the peripheral

inter-district centers)	videoconferencing, diagnostic researches conducting with the remote transmission	equipment for the remote diagnostics
The tele-medical room of the 2 type (on the basis of CRH of the remote districts)	The materials preparation for the delayed consultations the documents' obtaining by electronic mail, diagnostic researches' conducting (ECG) with the remote data transfer	The personal computer, the simplest instrument input of the medical information (WEB-camera, flat-bed scanner, digital camera), the peripheral equipment for the ECG remote diagnostics

The Scheme No.1. The Structure, Functions and Technological Base of E-Health Network of the Region.

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