Technology of Municipal Public Health Service Assessment

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Abstract: The article presents the description of evaluation technology on efficiency activity of Municipal System of Public Health Service (MSPHS). The basic elements of technology are the sets of special parameters and indices. The technology allows standardizing the strategic object of MSPHS. The results of empirical technology approbation by the example of Belgorod MSPHS are stated in the article.

Keywords: Municipal System of Public Health Service; medical establishments; integral indices; social determinants; management of social system.

Within the framework of the chosen policy of public health services national system superdecentralization [1] the state stimulates the development of municipal networks of Medical Establishments (ME), according the Program of Modernization of public health services of the subjects in Russian Federation.

However alongside with importance of the tasks for Municipal System of Public Health Services (MSPHS), the socio economic purposes in public health services remain relative ones, as the only mechanism of their achievement efficiency estimation is the conformity of statistical parameters of medical activity in subordinated Medical-Prophylactic Establishment (MPE) with all-Russian parameters, that excludes an opportunity of reason defining of the MSPHS final condition and comparing various ME in one municipality among themselves.

The object of our paper is the development of technology of MSPHS activity estimation on the basis of integrated parameters system (Technology) allowing to solve a number of actual tasks of domestic public health services, including: 1) to estimate socio economic work of establishments of public health services operatively at insignificant resource expenses; 2) to make comparisons of multiprofile medical establishments at the expense of use of the normalized and universal parameters; 3) to diagnose individual problems negatively reflected on general MPE activity, including economic ones, by reception information, usually dim on a general background of huge files, characteristic for large medical organizations, which is difficult to correlate with totals; 4) to make a grouping of establishments, typical of the majority, MSPHS problems and to rank them on a degree of importance and sequence of elimination; 5) to redistribute material and personnel resources inside MSPHS; 6) to develop the program of MSPHS activity optimization on the basis of the urgent and authentic information.

The Technology includes five consecutive stages: stage I – system engineering of integral parameters and indices estimating socio economic activity of MPE MSPHS; stage II – gaining of intersystem information for estimation of integral parameters; stage III – estimation size of integral parameters and drawing up of an MSPHS estimation card; stage
IV – comparison of importance of the received integral parameters with normative sizes; stage V – development of the program of optimization of MSPHS activity.

With the help of relative MSPHS modeling by iteration and account of the specific factors of branch, three final social phenomena arising during realization scale of intersystem processes (parameters of activity) involving set of all other repeating actions are determined in Technology as results of system activity under the estimation: 1) "The performance of the municipal task" – main quantitative value reflecting volume of carried out work by medical establishment (medical efficiency); 2) "The satisfaction of the patients by medical aid" – an important section in the activity of any establishment of public health services expressing as a feedback with the patients describing a multicomponent subjective assessment of MPE works by the patients (social efficiency); 3) "The performance of the consolidated budget" – integrated base generalizing the data on quality of statistical, medico-economic planning, the performance of design-cash discipline, expediency and efficiency of the made charges (economic efficiency). In our opinion the given social phenomena reflect functioning of all MSPHS.

The defining of integral parameters (and parameters for their estimation) determining a condition named resulting variable MSPHS was made with the help of a Delphi method, in which 12 highly skilled experts have taken part in the field of public health service organizing. As a result the hierarchical system of MSPHS estimation, containing 15 key parameters of activity of system and 25 integrated parameters for their estimation was formed.

The estimation of MPE activity parameter (P) is calculated as the algebraic sum of the parameters meanings, appropriate to it(ip):

\[ P = \sum_{ip}^{n} P \]  \hspace{1cm} (1).

The general integral estimation of MPE activity (I MPE) is calculated as the algebraic sum of estimations of all activity parameters:

\[ I_{MPE} = \sum_{p}^{n} P \]  \hspace{1cm} (2).

The general integral estimation of activity MSPHS expects as average arithmetic I MPE (included in its structure):

\[ I_{ME} = \sum_{me}^{n} I_{MPE} \]  \hspace{1cm} (3).

At the second stage of Technology it is necessary to define a level of detailed elaboration realization in the analysis of MSPHS work. For realization of periodic supervision behind activity MPE it is expedient to use the integrated initial data in account of estimation parameters of the basic parameters of activity, that is to examine the information on work of establishments as a whole without gradation on medical branches (consulting rooms) or medical officers.

Within the framework of the third stage of Technology the direct account of integral parameter value is made.

At the fourth stage of Technology the analysis of the received results, their comparison to normative meanings is carried out; the directions for the subsequent detailed study get out.

On the fifth closing stage of Technology the updating of the program of optimization of MSPHS is performed [2].

The approbation of technology was carried out on the base of Belgorod MSPHS on results of 9 month-work in 2011. The objects of this research were 14 multiprofile MPE, having various organizational structure and capacity: MBEPHS "Municipal clinical hospital № 1"; MBEPHS "Municipal hospital №2"; MBEPHS "Children's Municipal hospital"; MBEPHS "The Centre of general medical practice"; MBEPHS "Municipal polyclinic № 2"; MBEPHS "Municipal polyclinic №4"; MBEPHS "Municipal polyclinic №
The general average integral estimation of Belgorod MSPHS was 19.9 units out 33.5 that testifies to the satisfactory system functioning.

Thus, according the carried out approbation of technology of MSPHS estimation on the basis of system of integrated parameters we formulate the following conclusions:

1) Used algorithm of actions, the universality of parameters, the simplicity of accounts and information gathering allow to apply the given technology in various municipal systems of public health services including multiprofile medical establishments.

2) The detailed analysis of functioning separate Belgorod MPE MSPHS has allowed to reveal typical problems and their interrelations for all establishments, including the insufficiently organized flow of movement of the patients between establishments of public health services, inexact planning of medical position function, inefficient use of budget assignments and others, which consecutive elimination is planned to perform during 2012–2015.

References:

УДК 316.42:35
Технология оценки муниципальной системы здравоохранения

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Аннотация: В статье приводится описание технологии по оценке эффективности деятельности муниципальных систем здравоохранения (МСЗ). Основными элементами технологии являются наборы специальных параметров и показателей. Технология позволяет стандартизировать стратегическое целеполагание МСЗ. Изложены результаты эмпирической апробации технологии на примере МСЗ города Белгорода.

Ключевые слова: муниципальная система здравоохранения; медицинские учреждения; интегральные показатели; социальные детерминанты; управление социальной системой.