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Abstract

Health technology assessment is the focus of public health experts and the global community. The public health promotion programs at any level are integrated organizational technology (innovation project) that can be covered by the general requirements of the HTA (health technology assessment) formulated by EUnetHTA (European Network for Health Technology Assessment), but they need to be specified for different types of technologies. The latter is the purpose of the study. Results and discussion. Considering public health promotion Programme from the viewpoint of the system approach methodology as a complex organizational technology justified the need to use a multi-criteria approach (Multi-criteria decision analysis, MDA) to assess it. The methodology was developed on the basis of data from the content analysis of literature and regulatory and methodological materials using the method of expert assessments. It provides a comprehensive quantitative assessment of the Programme, which can contribute to the objectification of support for management decisions for increasing its innovation and, accordingly, ensuring the strategy of innovative development of health care in the region. Conclusion. Assessment of the value of the Programme should take into account the status of all its components, state of their spatial and temporal characteristics, the ability to achieve targets of public health improvement, the real usefulness and efficiency of the Program.

Keywords

Health promotion – Innovative programs – Standardization of assessment – Methodological basis

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Introduction

Strengthening public health widely uses the program-oriented approach which is reflected in the implemented federal and regional Programs. The large number of available public health promotion Programs makes it possible to choose an analog when developing its own Program in the region. In fact, the Program is the same organizational technology, only the integrated one. The issue of medical technology assessment is common to countries around the world and it is focused on the general principles of HTA (health technology assessment), formed by EUnetHTA (European Network for Health Technology Assessment)¹. According to these principles, any technology aimed at improving the health of the population is subject to evaluation and should be evaluated in terms of its ability to improve the health of the population and to lead to other positive social and ethical consequences. In Russia, the concept and types of innovation are legally approved, including the 'process (technology)' and 'innovation project', which makes the search for criteria for evaluating the innovation of Programs not only necessary, but also legally qualified. All that determined the purpose of the study to develop this methodology.

Materials and methods

The methodological basis of the development is a systematic approach that considers the object (in particular, the Program) as a system with many elements (organizational technologies, organizational structures, as well as mechanisms of their interaction), which develops in time and space affected by many factors, which requires using a multi-criteria approach to its assessment². The approach to the public health promotion Program as an innovation³ needs to determine the degree of its innovation, the type of innovation, time and spatial scale, globality, economic costs, and their justification. If talking about the quality of the Program, it is advisable to focus on the Donabedian triad in its assessment. This triad includes an effective, process-wise and structural approaches⁴. The following working definitions in health protection are used in this study: 1) health protection technology is the process of implementing developed measures that ensure the preservation, strengthening and prevention of violations of individual and public health, active formation of a healthy lifestyle⁵, 2) health protection is the implementation of a system

¹ M. V. Garrido; F. B. Kristensen; C. P. Nielsen y R. Busse, *Оценка медицинских технологий и формирование политики здравоохранения в странах Европы»* (Copenhagen, 2010).

² Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data, 3rd Edition. Retrieved from: <http://www.oecd.org/sti/inno/oslomanualguidelinesforcollectingandinterpretinginnovationdata3rdedition.htm>

³ Measurement of Scientific, Technological and Innovation Activities. Retrieved from: <https://doi.org/10.1787/24132764>; T. P. Vasil'eva; A. V. Melerzanov; A. A. Almazov; M. D. Vasil'ev & O. Yu. Aleksandrova, "Assessment of the innovation of public health technologies", *Vrach i informatsionnye tekhnologii*, num 2 (2020): 6 -20; Balancing costs and benefits at different stages of medical innovation: a systematic review of Multi-criteria decision analysis (MCDA). Retrieved from: <http://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-015-0930-0> y V. Z. Kucherenko, (Ed.), *Economics and innovation processes in healthcare. Study guide* (Moscow, 1994).

⁴ S. A. Palevskaya; N.S. Izmalkov & M.K. Blashentsev "Program approach as an organizational technology of health protection (on the example of the implementation of the Densaulyk (Health) program, Kazakhstan)". *Ural'skiy meditsinskiy zhurnal*, num 14 (182) (2019): 131-137 y S. A. Palevskaya & S. Yu. Goryachkina, "Contextual semantic analysis of the regulatory framework for the regulation of a healthy lifestyle", *Ural'skiy meditsinskiy zhurnal*, num 10 (178) (2019): 161-167.

⁵ Balancing costs and benefits at different stages of medical innovation: a systematic review of Multi-criteria decision analysis (MCDA). Retrieved from:

of measures aimed at integrating health protection technologies into production and involving target audiences in their use⁶.

The research program included a set of methods: analytical, statistical, and expert methods. The object of the study was the characteristics of the Program as an organizational medical technology (health protection technology). Information about characteristics was collected using the methods of content analysis of Russian and foreign literature, legal acts, and expert analysis. The expert group includes specialists in public health, including chief specialists of health management bodies of the Russian Federation, teachers of the departments of public health and health organizations, researchers with many years of experience in public health, health care and expert activities. The basis for selecting characteristics was a high value of the concordance coefficient (0.9 and >) calculated using the formula: $W = \frac{12S}{m^2(n^3 - n)}$, where W is the concordance coefficient, m – the number of

experts, n - the number of characteristics, S – the difference between the sum of the squares of ranks for each characteristic and the average square of the sum of ranks for each characteristic. Data processing was performed using biostatistics methods in Excel software, calculation of indicative indicators and indicative corridors.

Results and discussion

According to the content analysis of Russian and foreign literature, legal acts, and expert opinions, 53 characteristics proposed by various researchers for evaluating organizational medical technologies (HTA) may be identified. Based on an objective assessment of the consistency of experts' opinions on the significance of these characteristics as criteria for innovation of the complex organizational technology 'public health promotion Program', it was found that ten of them met the selection criteria (W-0.9 or more). These criteria were included in the developed multicriteria assessment methodology:

1) the '**science intensity**' criteria, the essence of which is the validity of the Program, can have high level - it means that the Program is based on the results of scientific research conducted on the principles of evidence-based medicine and good scientific practice, medium – based on statistical data/or improper scientific practice, low indicates lack of evidence.

2) the '**priority**' criterion, the essence of which is the novelty of the Program, can be radical (a new previously non-existing product/process/project) or modified (improved previous product/process/project).

3) the criterion of '**resource intensity**', the fundamental basis of which is the amount of resource costs, including the cost of developing the Program and its implementation, the development of the material and technical base to the required level, the purchase of

<http://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-015-0930-0>; T. P. Vasil'eva & V. S. Nechaev, "Innovative technologies in health care and health promotion of the population: methodological aspect", Byulleten' natsional'nogo nauchno-issledovatel'skogo instituta obshchestvennogo zdorov'ya imeni N.A. Semashko, num 2 (2020): 16-20 y Yu. Kurnosov, The ABC of analytics: an introduction to the theory and practice of analysis (Moscow: Kontseptual, 2018).

⁶ T. P. Vasil'eva; A. V. Melerzanov; A. A. Almazov; M. D. Vasil'ev & O. Yu. Aleksandrova, "Assessment of the innovation of public health technologies", Vrach i informatsionnye tekhnologii, num 2 (2020): 6-20 y T. P. Vasil'eva & V. S. Nechaev, "Innovative technologies in health care and health promotion of the population: methodological aspect", Byulleten' natsional'nogo nauchno-issledovatel'skogo instituta obshchestvennogo zdorov'ya imeni N.A. Semashko, num 2 (2020): 16-20.

consumables, primary and supporting training of personnel and the population. According to the aggregate assessment, the Program can be high-, medium- and low-cost,

4) the **'manufacturability'** criterion, which is based on the volume of innovative technologies included in the Program. At the same time, a Program with the number of technologies more than 70% can be considered highly innovative, medium innovative - that has this number in the range of 30 to 70%, and up to 30% is low innovative Program,

5) the criterion **'reality'**, the essence of which is the possibility of full implementation of the Program in the existing macro and microsocial conditions, may determine whether it is real, partially real or unreal.

6) the **'accessibility'** criterion, which is based on the possibility of involving target audiences in the Program without restrictions and with the proper publicity, can be high when involving the entire target audience is possible without the time, geographical, economic, and other barriers, and without large-scale preparatory and supporting informational activities. Intermediate level is granted when the involvement of about half the target audience with the medium-scale periodic information shares; low level is when involving less than half of the target audience interested in the Program and the need for continued large-scale publicity,

7) the **'scale'** criterion describes the state of the five components: focus on the Program by branches, disciplines, levels of provision, types, conditions and forms of medical care, and totality of inclusion of necessary structures and participants⁷. Assessment of sectoral or intersectoral Programme focus is performed regarding the number of industries included in the work with target audiences. Disciplinary or interdisciplinary focus shows the number of disciplines of the Programme specialists. Assessment of the scale of the Program's focus on types of medical care is based on determining the scale of participation of the target audience. Moreover, the focus may be on the average values for the volume of medical care established by legal acts. Thus, the average volume of primary health care (visits) is 3-10 times higher than the average volume of other types of medical care. Hence, the identification of the Program's focus on primary health care and emergency care indicates that it is aimed at working with the most mass target audiences of the population and, accordingly, with medical workers in medical institutions. Identification of the Program's focus on specialized medical care shows that it is aimed at working with average mass target audiences, and the focus on high-tech medical care and palliative care shows the Program's focus on a selective target audience. Hence, the Program can be classified as a mass, medium-mass, and selective technology. An assessment of the scale of the Program by the full involvement of structures working at each level of medical care and/or providing each type of medical care in the Program shows that the Program can be total (all institutions are included) or selective. Taking into account all five components levels the size of the Program can be: high (the Program is interdisciplinary, multidisciplinary, multilevel, mass, and total), medium (Program is single-industry, monodisciplinary, single-level, medium-mass, and partially subtotal) and low (the Program is single-industry, monodisciplinary, single-level, selective, and subtotal),

8) the **'recognition'** criterion shows the level of recognition of the Program in the world and Russian communities of scientists, practitioners and managers of health management bodies. Signs of recognition can be awards at exhibitions, conferences, national governments, granting the 'Best practice' title, placement on the official websites of executive authorities, publication of normative legal acts (order), etc. The criteria for a high level of recognition of the Program are recognition at the global and all-Russian levels with

⁷ V. I. Starodibov; O.P. Shchepin, et al. (Eds.), Public health and healthcare. National study guide (Moscow: ZH GEOTAR-Media, 2013).

the publication of corresponding regulatory document; medium level is recognition at the subject and (or) institutional level, low level means no recognition.

9) the **'effectiveness'** criterion is the assessment of the correctness and completeness of targets selection (hereinafter - TS), respectively, the Program goal, as well as the validity of their planned level and the chances of its achievement. The analysis of the correctness of the TS selection specified in the Program requires their comparison to the proper ones, determined by the expert following on the goals and objectives of the Program, and focusing on known indicators of public health⁸. At the same time, the experts should consider that although public health promotion programs are named health promotion, they may have the purpose and (or) the preservation and prevention of public health violations, which requires an appropriate set of targets. For example, the TS of improving public health should include the indicators of the dynamics of the number of healthy people, people with risk factors of major noncommunicable diseases (obesity, smoking, alcoholism and other toxic addictions, unhealthy diet, physical inactivity, etc.), and the TS of preventing violations of public health should include the proportion of the diseases identified at an early stage and the incidence of diseases development in risk groups. In addition to the proper selection of the TS, it is necessary to evaluate the validity of their calculated level using mathematical modeling and the chances of its achievement. The criteria for a high level of adequacy of the TS selection are determined by full compliance with the list established by the experts, the validity of the planned TS level by mathematical modeling and the chances of its achievement in the expert's opinion. The criteria of mid - level include the conformity 30 to 70% to the TS specified in the Program, their list, the lack of forecasting and reality of attainment. The low level indicates a complete mismatch of the TS to the list without prior forecasting, planning level and the unrealistic achievement, according to experts.

10) the **'efficiency'** criterion is based on integral assessment of medical effectiveness according to authoritative improve of targeted health indicators (THI) after the implementation of the Program, as measured by the ratio of medical efficiency, social efficiency according to the degree of reliable improvement of social target values (STV) after the implementation of the Program, as measured by the ratio of social efficiency and economic efficiency, as measured by coefficient of economic efficiency ('cost - efficiency'). When determining social efficiency, it is important to assess the population's opinion about improving medical care⁹ by the number of people satisfied ('good' mark) and the number of people with reasonable complaints, and after determining economic efficiency, one should determine the value of the Program by the level of the value coefficient. The criterion of high integral efficiency is simultaneous achievement of 70-100% of the Program's THI, STV and economic efficiency (within 1 to 7 or more), average shows the achievement of 30 to 70% of the THI, STV and/or finding the coefficient of economic efficiency within 1: <7, and low is the absence of achieving the THI and STV of the Program and the coefficient of economic efficiency within 1: 1 or >1: 1.

⁸ V. A. Medik & V. I. Lisitsin, Public health and health care: course book. 4th ed., rev. and ext (Moscow: GEOTAR-Media, 2017); Yu. P. Lisitsyn & G. E. Ulumbekova, Public health and health care: course book for students of institutions of higher education, professional education in the specialty 060101.65 "General Medicine", 060103.65 "Pediatrics", 060104.65 "Medical-professional-business", 060105.65 "Dentistry" in the discipline "Public health and health care". 3rd ed (Moscow: GEOTAR-Media, 2011) y Yu. V. Mikhaylova; T. A. Siburina; I. M. Son; V. O. Shchepin; A. L. Linderbraten & A. Yu. Mikhaylov, "Public opinion about healthcare: the main factors of increasing the satisfaction of the population with medical care". Problemy sotsial'noy gigiyeny, zdravookhraneniya i istorii meditsiny, Vol: 27 num 3 (2019): 231-237.

⁹ Retrospective Review of Lung Cancers Diagnosed in Annual Rounds of CT Screening Dong Ming Xu, Rowena Yip, James P. Smith, David F. Yankelevitz and Claudia. Henschke November 2014, Vol: 203 Num 5, Cardiopulmonary Imaging Original Research.

To obtain a final quantitative assessment of the Program's innovativeness using these criteria, a special scale has been developed (Scheme 1).

criteria	Gradation	Ranges/Points
Science intensity	High level (evidence-based scientific and statistical base)	AR/10 points
	Average level (lack of evidence of scientific and statistical base)	CAR/ 9 - 1 points
	Low level (lack of information base)	UR/ 0 points
Priority	High level (radically new development)	AR/10 points
	Medium level (modification)	CAR/ 9 - 1 points
	Low level (simple reproduction)	UR/ 0 points
Resource intensity	High level (low-cost, more than 100 mln RUB)	AR/10 points
	Medium level (medium-cost, 100-500 mln RUB)	CAR/ 9 - 1 points
	Low level (high cost of more than 500 mln RUB)	UR/ 0 points
Manufacturability	A high level (the ratio of highly innovative technologies is 70-100%)	AR/10 points
	Medium level (the ratio of highly innovative technologies is 30 to 70%)	CAR/ 9 - 1 points
	Low level (the ratio of highly innovative technologies from 0 to 30%)	UR/ 0 points
Reality	High level (actually achievable in terms of goals and resources at the moment of creation)	AR/10 points
	Medium level (conditionally feasible after creating certain conditions)	CAR/ 9 - 1 points
	Low level (impossible to complete in terms of objectives and resources)	UR/ 0 points
Availability	High level (available for the entire TA, no large-scale preliminary and support work with the TA is required)	AR/10 points
	Medium level (is partially available for TA, no large-scale preliminary and supporting work with the TA is required)	CAR/ 9 - 1 points
	Low level (<50% of TA available, requires large-scale preliminary and supporting work with the TA)	UR/ 0 points
Scale:	High level (intersectoral, interdisciplinary, multi-level, mass, total)	AR/10 points
	Medium level (single-industry, monodisciplinary, single-level, medium-mass, subtotal)	CAR/ 9 - 1 points
	Low level (single-industry, single-discipline, single-level, selective, subtotal).	UR/ 0 points
Recognition	High level (world and all-Russian recognition)	AR/10 points
	Medium level (recognition in entities and institutions)	CAR/ 9 - 1 points
	Low level (lack of recognition)	UR/ 0 points

Effectiveness	High level (full compliance of the TV volume to the proper level, scientific justification of the planned TV level, the reality of achievement)	AR/10 points
	Medium level (incomplete compliance of the used set of TV to the proper ones, justification of the planned level of almost all used TV, conditionally possible to achieve)	CAR/ 9 - 1 points
	Low level (complete mismatch of the used TV set to the proper one, the planned level of TV achievement is not justified, impossible to achieve)	UR/ 0 points
Efficiency	High level ('cost - efficiency' is 1: 7 or more)	AR/10 points
	Medium level ('cost-efficiency' ranges from 1: 3 to 1: 7)	CAR/ 9 - 1 points
	Low level ('cost-efficiency' ranges from 1:1 to 1: 3)	UR/ 0 points
Total multicriteria score, max		100 points
	High level	AR = 70-100 points
	Medium level	CAR = 30-70 points
	Low level	UP = 30 points or lower

Note: MC - medical efficiency coefficient, SC - social efficiency coefficient, EC - economic efficiency coefficient, TA - target audience, TV - target values AR - acceptable range, IR - unacceptable range, CAR - conditionally appropriate range.

Scheme 1

Scale of multicriteria assessment of innovation of the Program of health protection

To obtain initial information about the characteristics of the technology, this work proposes an 'Initial registration of the Program card' and a special algorithm to obtain an evaluation summary. The algorithm for expert evaluation of the value of organizational medical technology 'Public health promotion Program' is simple: one needs to have the full text of the Program, a form for 'Initial registration card of the Program' and a multi-criteria rating Scale. The algorithm includes 4 steps. First step is the study of the Program; step 2 is filling the 'Initial registration Card of the Program'; step 3 is determining the score of the identified characteristics of the Program using the Scale; step 4 is determining the final total score and the level of innovation of the Program according to the scale. Based on the results of the multicriteria assessment, the expert forms a conclusion about the Program's innovation and proposes decisions to improve it.

Thus, the system approach allowed to consider the public health promotion Program as a complex organizational medical technology. The developed method of multicriteria assessment provides a comprehensive quantitative assessment of the Program's innovation, which can contribute to the objectification of support for the management decision to ensure the strategy of innovative development of health care in the region.

References

Balancing costs and benefits at different stages of medical innovation: a systematic review of Multi-criteria decision analysis (MCDA). Retrieved from: <http://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-015-0930-0>

Garrido, M. V.; Kristensen, F. B.; Nielsen, C. P. & Busse, R. Оценка медицинских технологий и формирование политики здравоохранения в странах Европы». Copenhagen. 2010.

Kucherenko, V. Z. (Ed.). Economics and innovation processes in healthcare. Study guide. Moscow. 1994.

Kurnosov, Yu. The ABC of analytics: an introduction to the theory and practice of analysis. Moscow: Kontseptual. 2018.

Measurement of Scientific, Technological and Innovation Activities. Retrieved from: <https://doi.org/10.1787/24132764>

Medik, V. A. & Lisitsin, V. I. Public health and health care: course book. 4th ed., rev. and ext. Moscow: GEOTAR-Media. 2017.

Mikhaylova, Yu. V.; Siburina, T. A.; Son, I. M.; Shchepin, V. O.; Linderbraten, A. L. & Mikhaylov, A. Yu. "Public opinion about healthcare: the main factors of increasing the satisfaction of the population with medical care". Problemy sotsial'noy gigiyeny, zdravookhraneniya i istorii meditsiny, Vol: 27 num 3 (2019): 231-237.

Lisitsyn, Yu. P. & Ulumbekova, G. E. Public health and health care: course book for students of institutions of higher education, professional education in the specialty 060101.65 "General Medicine", 060103.65 "Pediatrics", 060104.65 "Medical-professional-business", 060105.65 "Dentistry" in the discipline "Public health and health care". 3rd ed. Moscow: GEOTAR-Media. 2011.

Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data, 3rd Edition. Retrieved from: <http://www.oecd.org/sti/inno/oslomanualguidelinesforcollectingandinterpretinginnovationdata3rdedition.htm>

Palevskaya, S. A.; Izmalkov, N. S. & Blashentsev, M. K. "Program approach as an organizational technology of health protection (on the example of the implementation of the Densaulyk (Health) program, Kazakhstan)". Ural'skiy meditsinskiy zhurnal, num 14 (182) (2019): 131-137.

Palevskaya, S. A. & Goryachkina, S. Yu. "Contextual semantic analysis of the regulatory framework for the regulation of a healthy lifestyle". Ural'skiy meditsinskiy zhurnal, num 10 (178) (2019): 161-167.

Retrospective Review of Lung Cancers Diagnosed in Annual Rounds of CT Screening Dong Ming Xu, Rowena Yip, James P. Smith, David F. Yankelevitz and Claudia. Henschke November 2014, Vol: 203 Num 5, Cardiopulmonary Imaging Original Research.

Starodibov, V. I.; Shchepin, O.P., et al. (Eds.), Public health and healthcare. National study guide. Moscow: ZH GEOTAR-Media. 2013.

Vasil'eva, T. P.; Melerzanov, A. V.; Almazov, A. A.; Vasil'ev, M. D. & Aleksandrova, O. Yu. "Assessment of the innovation of public health technologies". Vrach i informatsionnye tekhnologii, num 2 (2020): 6 -20.

Vasil'eva, T. P. & Nechaev, V. S. "Innovative technologies in health care and health promotion of the population: methodological aspect". Byulleten' natsional'nogo nauchno-issledovatel'skogo instituta obshchestvennogo zdorov'ya imeni N.A. Semashko, num 2 (2020): 16-20.

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