
MODEL FOR MANAGEMENT OF MEDICAL ACTIVITIES AT DIFFERENT LEVELS IN THE HEALTH SYSTEM

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Abstract: This article presents the idea of management of medical activities, which is based on established formulations of management science, which form the concept of Total Quality Management - "Total Quality Management.

The aim of the publication is to present a model for planning and managing the activity of operative interventions for oncological disease (breast cancer) in a health system, based on previous research of the author and approved concepts for quality management of production in the economic sphere.

Health planning is carried out at three levels: central level, state level and district level. Health policy is planned at the central level. This level contains the overall goals of the environment - the health system. Situational analysis and resources are applied to reach the national level of the goals. Strategic planning is carried out at the state level, and the goals should be based on local models of morbidity and mortality. Providing specific inputs in the field to achieve the goals. At the district level, operational planning is carried out through the application of activities based on target needs. Optimal use of available resources

Health planning, at each level, whether related to public health and disease management, is carried out through a planning cycle, respectively a health planning cycle. The cycle repeats the main stages typical for product planning in the economic sphere. The stages reflect the path of improvement of the activity, whose main tool is the Deming / Schuhard cycle - "PDCA-cycle / PDSA cycle

A key element of the idea is the concept of continuous improvement, which aims to improve business processes. Its main tools are: the Deming cycle, benchmarking, the situational model and the 20-key system. Each of these tools should occupy a specific place in the Planning and Management Cycle.

The proposed model for management and planning of diagnosis and treatment of cancer, as each system is composed of elements and connections (relationships between the elements), united in a common function. The elements include all types of resources: district hospitals; university hospitals that carry out oncological activity (in the author's research - breast cancer surgery); facilities; human resources - surgeons, oncologists and radiotherapists; At the district level are the needs for surgical treatment of cancer.

Surgeons - oncologists, specialists in medical oncology, radiation therapy and chemotherapy, unite in a centralized team. The aim of the team is to form a standard of diagnosis and treatment and a unified approach and to perform surgical and other medical activities according to it.

The standards are constantly updated based on the operation of the PDCSA cycle. Periodically, monitoring and analysis of morbidity and mortality are performed for all levels, on the basis of which strategies and policies are prepared at all levels of the health system. Health institutions such as the Ministry of Health and the National Health Insurance Fund also participate in the preparation of the latter.

The expectations from the realization of the centralized team for diagnosis and treatment of breast cancer or other disease are: improving the quality of surgical activity, implementation of innovative methods of diagnosis and treatment, exchange of professional experience and scientific behavior.

Keywords: plan, strategy, health policy, quality, Pareto analysis, methods for evaluation and quality improvement.

1. INTRODUCTION

The Pareto principle was first applied in economics and then in the management of various fields, including healthcare, and hospital management for clinical case management, laboratory tests, the severity of clinical cases, drugs, treatment costs in general, and chronic diseases. .

When studying the contractual process in the conditions of health insurance in Bulgaria, for the activity of operative interventions for breast cancer, Pareto analysis revealed inefficiency of the contractual process, establishing that the market niche of the contracting activity is occupied mainly by the private sector. There is an uneven distribution of resources, as a result of which regions of the country remain without access or poor quality health care provided by small municipal hospitals. [Mineva 2020]

The aim of the publication is to present a model for planning and managing the activity of operative interventions for oncological disease (breast cancer) in a health system, based on previous research of the author and established concepts for quality management of production in the economic sphere.

2. THEORETICAL POSITION FOR HEALTH ACTIVITY PLANNING - SCHEME

Policies formulation requires the development of plans and their implementation. Proper planning and management are the essence of achieving high standards of public health.

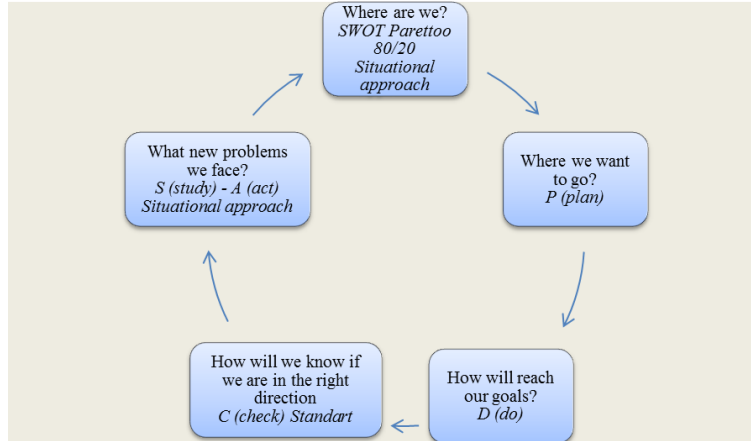
Health planning is carried out at three levels: central level, state level and district level. Health policy is planned at the central level. This level contains the overall goals of the environment - the health system. Situational analysis and resources are applied to reach the national level of the goals. At the state level, strategic planning is carried out, and the goals should be based on morbidity and mortality data. Providing specific inputs in the field to achieve the goals. At the district level, operational planning is carried out through the application of activities based on target needs. Optimal use of available resources (Table 1).

Table 1: Health planning (source Preventive and Social Medicine Mahajan & Gupta, 2013, p. 476

№	Level of planning	Съдържание
1.	Central level - policies planning	Comprehensive study of the goals of the environment; situation analysis and resources for achieving objectivity at the national level.
2.	State level - strategy planning	Targets should be based on morbidity and mortality patterns
3.	District level operational planning	Local needs. Use of available resources.

Planning is defined as organizing and continuously trying to choose the best available alternatives to achieve the desired goal. A plan is a drawing of actions whose components are goals, programs, sequentially related tasks, and a budget. Health planning at each level, whether public health or disease management, is carried out through a planning cycle, respectively a health planning cycle (Figure 1).

Figure 1: Health planning cycle (source Preventive and Social Medicine Mahajan & Gupta, 2013, p. 476



The cycle of Figure 1 repeats the main stages typical for product planning in the economic sphere. At the Where We Are stage, a situational analysis is applied. At the stage "Where we want to go", the priorities, goals and target areas for impact are set. At the stage "How will we get what we want", strategies for management, organization, sequence of tasks and training are developed. In the fourth stage, "How will we know if we are in the right direction and if we are achieving our goals", monitoring and evaluation of the results is applied. At the fifth stage - analysis, by studying the problems we face. They require re-programming of the activity, which corresponds to the principle of continuous improvement. The stages reflect the path of improvement of the activity, the main tool of which is the Deming / Schuhard cycle - "PDCA-cycle / PDSA cycle": P (planning): who (definition of responsibilities); what (defining goals and objectives); why (justification of the need); how (methods of execution); where (field of action); when (development of a plan - schedule); D (parallel to training the plan is implemented); C (verification, evaluation of achievements); S (study and analysis of the achieved results, in order to specify further actions); A (two types of action: introducing what has been achieved as a new standard or taking corrective action to improve what has been achieved).

3. MODEL FOR MANAGEMENT AND PLANNING OF MEDICAL ACTIVITIES AT DIFFERENT LEVELS IN THE HEALTH SYSTEM

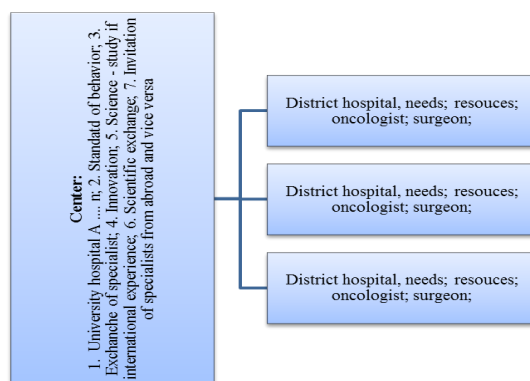
The idea of management and planning of medical activities is based on established methods and approaches of management science, which form the concept of Total Quality Management - "Total Quality Management - TQM". A key element of the idea is the concept of continuous improvement, which aims to improve business processes. The advantages of applying this concept are increased competitiveness of the organization and flexible response to change. Its main tools are: the Deming cycle, benchmarking, the situational model and the 20-key system.

The Deming cycle is at the heart of modern business management concepts because it shows the way to improvement. Through benchmarking, continuous improvement of any type of activity is carried out by comparison with a standard. The standard is not constant, but corresponds to changes in the external environment. The "20 keys" system is a tool for evaluating the effectiveness of the organization. The evaluation is performed on 20 keys, each of which is a critical factor for its functioning, on a five-point scale. For each of the 20 keys, the level at which the organization is currently located is determined and its weaknesses are identified. Situational approach - includes SWOT analysis, adaptation to external conditions, the presence of several "correct" ways, the concept of distinctive / key competencies. In its essence it represents: knowledge that needs to be developed, habits that need to be acquired, constant improvements, directly related / dependent on the changes and circumstances of the external business environment. The situational approach, in addition to the beginning of the health planning cycle (activity), should be considered at the level of - S (study and analysis of the results achieved, in order to clarify further actions).

Each of these tools should play a role in the Planning and Management Cycle (Figure 1).

The proposed model for health management and planning, in particular for the diagnosis and treatment of oncological disease, as each system is composed of elements and connections (relationships between the elements), united in a common function. The elements include all types of resources: 1. regional hospitals; 2. university hospitals, which carry out oncological activity (in the author's research - breast cancer surgery); 3. material base; 4. human resources - surgeons, oncologists and radiotherapists; At the district level are: district hospitals, complex oncology centers, resources, the need for surgical treatment of cancer. To meet these needs, it is necessary to overcome the geographical factor and adverse conditions by organizing and coordinating activities, namely the establishment of relations between the district levels and the central level (Figure 2).

Figure 2: Model for management and planning of diagnosis and treatment of cancer (source - the author) Centralized team for diagnosis and treatment of breast cancer



The elements at the central level are 1. University and A: A, B, n; 2. Standard of behavior - movement of the patient when, where, what is done; 3. Exchange of specialists between the central level and the regional levels; 4. Implementation of innovations; 5. Development of science - study of international experience; 6. Scientific exchange - invitation of specialists from abroad and vice versa; 7. Benchmarking - international ?!

Surgeons - oncologists, oncology surgeons, specialists in medical oncology, radiation and chemotherapy, imaging, clinical laboratory, immunology and others, unite in a centralized team. The goal of the team is to form a standard of

diagnosis and treatment and a unified approach and perform surgical and other medical activities, according to him. It is necessary for the oncologist-surgeon who works in a district hospital to have classes for "his" or other patients in the university hospitals of the center. A standard of behavior is developed with mandatory characteristics and tasks, without the implementation of which treatment cannot be started. This implies a revision and change of the current existing "protocols", which are administered and somewhat informative. The standards are constantly updated based on the operation of the PDCSA cycle. Periodically, monitoring and analysis of morbidity and mortality is performed for all levels, on the basis of which a strategy and policies for health / specific disease are prepared at all levels of the health system. Health institutions such as the Ministry of Health and the National Health Insurance Fund also participate in the preparation of the latter.

At the central level, activities are carried out through the tools of the concept of continuous improvement described above.

The expectations from the implementation of the centralized team for diagnosis and treatment of breast cancer or other disease are: improvement of health indicators for health / for the disease, improvement of the quality of surgical activity, introduction of innovative methods of diagnosis and treatment, exchange of professional experience and scientific conduct.

4. CONCLUSION

Health planning at each level, whether related to public health and disease management, is carried out through a planning cycle, respectively a health planning cycle.

The stages of the health planning cycle reflect the path of improvement of each activity whose tools are the Deming / Schuhard cycle.

A model for planning and managing health or for a specific disease can be developed in practice - for the diagnosis and treatment of breast cancer, which model is built "on" the concept of continuous improvement and its tools: Deming cycle, benchmarking, system 20 the key and situational approach.

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