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## **THE IMPORTANCE OF DEVELOPING A ROADMAP FOR ANTICRISIS MANAGEMENT IN THE HEALTHCARE SECTOR**

**Summary.** *Introduction. Anticrisis management in the healthcare sector is crucial in ensuring stability and rapid response to unforeseen emergencies. The COVID-19 pandemic highlighted the weaknesses and challenges in healthcare systems globally, emphasizing the need for a proactive and strategic approach. This study underlines the role of developing a roadmap for crisis management as a means to enhance preparedness, improve resource allocation, and ensure sustainable healthcare operations under uncertain conditions. Key factors such as economic constraints, the growing demand for healthcare services, and the rapid development of medical technologies further underscore the importance of a systematic crisis response strategy.*

*The purpose of this study is to provide a theoretical justification for the importance of implementing and developing a roadmap for anticrisis management in the healthcare sector.*

*Materials and methods. The study employs a mixed-methods approach, including qualitative and quantitative analyses. Statistical data on healthcare financing and COVID-19 morbidity rates are examined to assess the economic and operational challenges within the sector. Literature review and case studies from both national and international sources are used to synthesize existing knowledge and practices. Analytical frameworks for assessing healthcare*

*efficiency and management effectiveness provide a foundation for roadmap development.*

*Results. The study revealed that Ukraine's healthcare sector faces significant challenges, including insufficient funding, lack of qualified personnel, and high costs of services. An analysis of COVID-19 statistics highlighted the critical need for a structured approach to crisis management. The proposed roadmap outlines actionable strategies to enhance system resilience, including resource allocation, priority setting, communication strategies, and stakeholder engagement. Additionally, international comparisons of healthcare financing reveal gaps and opportunities for improvement in Ukraine's healthcare system.*

*Discussion. The findings of this study contribute to the growing body of knowledge on crisis management in healthcare. The proposed roadmap serves as a strategic tool for addressing current challenges and preparing for future crises. The research emphasizes the need for a coordinated effort among policymakers, healthcare institutions, and international partners to achieve sustainable healthcare development. Limitations include the focus on Ukraine's context, which may require adaptation of the roadmap for broader applicability. Future research should explore the integration of technological innovations and global best practices into crisis management strategies.*

**Key words:** *anticrisis management, roadmap, healthcare sector, crisis, COVID-19.*

**Problem statement.** The healthcare sector plays a critical role in ensuring stability and timely response to emergencies in the face of a sharp rise in the incidence of disease.

Today, in the face of constant change and uncertainty, such as epidemics, natural disasters and socio-economic crises, healthcare is becoming a key element in ensuring the safety and well-being of citizens. This sector is not only responsible for providing medical care to the population but also for preventing

diseases, controlling the spread of various types of diseases, preparing for emergencies, and providing necessary support during crisis situations.

The healthcare sector is designed to contribute to the productivity of society by ensuring a healthy workforce that can actively participate in economic and social development. In addition, the field ensures the safety of citizens and contributes to the preservation and improvement of the quality of life of the population through the prevention of diseases, timely diagnosis, and treatment. Thus, healthcare plays a strategically important role in ensuring the stability, prosperity, and development of society as a whole.

Through the continuous improvement of the healthcare system, including the development of anticrisis management roadmaps, society can be better prepared to face various challenges and crises, providing effective protection for its citizens.

**Analysis of recent research and publications.** The relevance of the issue of implementing anticrisis management in the healthcare sector, including the development of a roadmap, is not sufficiently studied in the scientific literature. However, given that in recent years the healthcare system has faced such a problem in practice - the COVID-19 pandemic - there is an urgent need for an in-depth study of this issue.

In their research, K. V. Shchyrina and O. K. Tolstanov (2023) consider the relationship between the level of morbidity and anticrisis management in the healthcare sector. In their work, the authors emphasise the need for healthcare facilities to be prepared to respond on time to public health emergencies. Understanding the complex relationship between morbidity and anticrisis management can improve preparation for unforeseen events, ensuring the protection of public health and well-being.

In turn, the works of I. V. Semchuk, G. S. Kukel, V. V. Rohleders (2020) and I. L. Sazonets, I. Y. Zyma (2018) analysed the importance of improving the management system, namely, it was determined that healthcare management

should be transformed with the development of the healthcare delivery system itself. In addition, making informed management decisions and effective management of a healthcare facility in a competitive environment should be based on reliable statistical and analytical data.

In their research, these scholars tried to analyse different methodological approaches to the development and implementation of anticrisis management in the healthcare sector. The conclusions of the authors are indeed very important for the formation of anticrisis management in this area, but insufficient attention is paid to the concept of "anticrisis management roadmap", which is one of the components of certain anticrisis management strategies. A healthcare anticrisis management roadmap is a guiding document that defines strategies, priorities, and action plans for effective crisis response. It serves as a basis for coordinating the efforts of various healthcare system stakeholders and ensures systematic and consistent anticrisis management.

Therefore, based on the above, **the purpose of this study is** to provide a theoretical justification for the importance of implementing and developing a roadmap for anticrisis management in the healthcare sector. To achieve this goal, **the following tasks were solved:** the concepts of "anticrisis management in the healthcare sector" and "roadmap" were defined; the main problems in the healthcare sector of Ukraine were identified; the main statistics on COVID-19 were considered; the dynamics of healthcare financing were analysed; the complex of actions of anticrisis management in the healthcare sector was studied; a general roadmap for anticrisis management was developed.

**Materials and methods.** The study employs a mixed-methods approach, including qualitative and quantitative analyses. Statistical data on healthcare financing and COVID-19 morbidity rates are examined to assess the economic and operational challenges within the sector. Literature review and case studies from both national and international sources are used to synthesize existing knowledge and practices. Analytical frameworks for assessing healthcare

efficiency and management effectiveness provide a foundation for roadmap development.

**Summary of the main material.** Today, the relevance of research in the field of anticrisis management is gaining importance in the face of constant and uncontrolled change. This issue is particularly acute in the healthcare sector. In recent years, the field under study has undergone significant changes due to the COVID-19 pandemic, which has necessitated the introduction of new management approaches, timely implementation, and improvement of anticrisis management.

According to O. V. Prokopenko, V. O. Shcherbachenko and V. S. Kulibaba (2020), "Anticrisis management in healthcare is the process of preparing, responding to and mitigating the effects of unexpected or adverse events, such as natural disasters, outbreaks of infectious diseases or medical emergencies that may disrupt the normal functioning of a hospital".

In turn, V. Vasylenko (2003), R. Keller (2019), L. Ligonenko (2014) and V. Bagatsky (2009) consider anticrisis management as a permanent subsystem of proactive management.

Also, such scientists as: O. Shapurov (2013), A. Stangret, M. Karaim and L. Sukhimlyn (2016) define anticrisis management as a functional management subsystem aimed at timely detection of crisis conditions and development and implementation of measures to overcome them.

Summarising these approaches, we define "anticrisis management" as a permanent system of control and decision-making measures aimed at diagnosing, preventing and mitigating crisis phenomena, as well as neutralising their consequences in the future.

According to the research by K. Poliak, O. Polishchuk, A. Valkovets (2022) and analysing of legislative and regulatory documents, we can identify the main problems in the healthcare sector of Ukraine (Table 1).

*Table 1*

**Major problems in the healthcare sector in Ukraine**

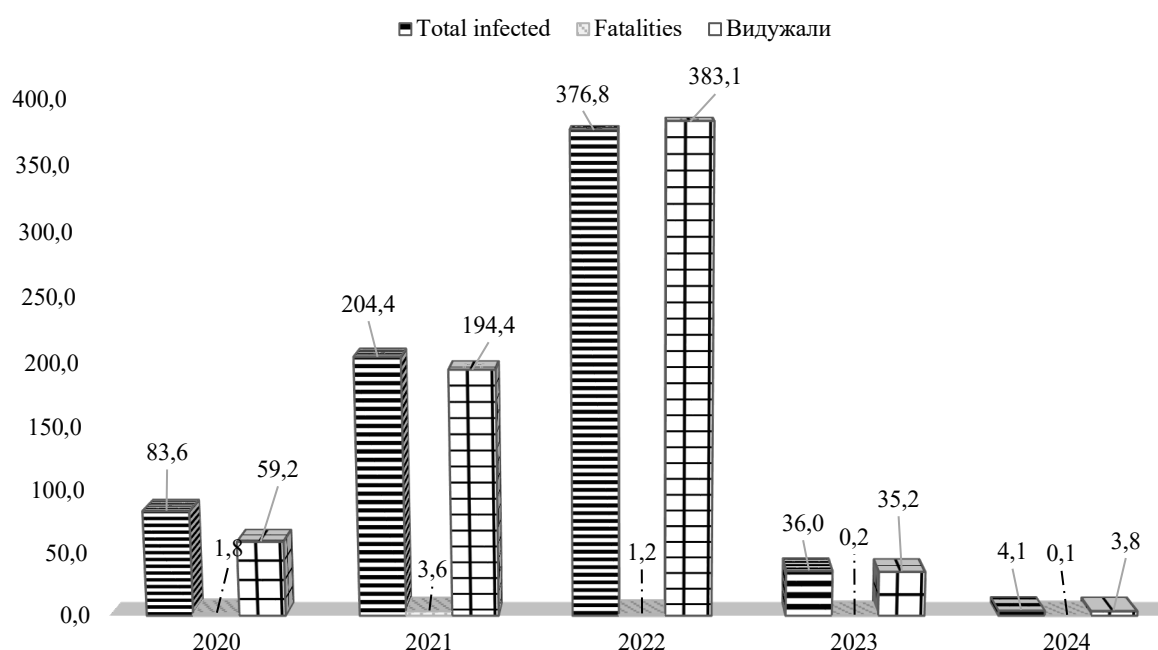
<b>№</b>	<b>The main problems</b>	<b>Characteristics</b>
1	Rejection of healthcare reforms	There is no clear understanding of what has happened and what changes are possible in the future.
2	High cost of medical services	Low purchasing power of the population, so paying for medicines and medical services is becoming increasingly costly for the family budget.
3	Poor quality of medical services	The system of officially free medicine, which is designed for mass consumption, cannot provide high quality medical services.
4	Lack of qualified medical staff	Rapid development of scientific and technological progress in the field of medicine, resulting in the need for retraining and advanced training of doctors, sponsorship and grant activities that help to introduce advanced technologies into the healthcare system.
5	Careless attitude to disease prevention	The establishment of market prices for medicines and medical services leads to a more careful attitude of people to their health and opens up opportunities for preventive measures.
6	Lack of financial resources for the development of medicine	This is due to the difficult socio-economic situation in Ukraine and the military operations.
7	Environmental problems	There are six groups of environmental problems: atmospheric (air pollution: radiological, chemical, mechanical, thermal); water (depletion and pollution of surface and groundwater, pollution of seas and oceans); geological and geomorphological (intensification of adverse geological and geomorphological processes, disturbance of relief and geological structure) soil (soil contamination, erosion, deflation, secondary salinisation, waterlogging); biotic (reduction of vegetation, forest degradation, pasture (ecological) digression, reduction of species diversity); complex (landscape) - desertification, reduction of biodiversity, violation of environmental protection regulations.
8	Economic crisis	A sharp deterioration in the country's economic situation, manifested in a significant decline in production, disruption of existing production links, bankruptcy of enterprises, increased unemployment, and, as a result, a decline in living standards and welfare, including in the healthcare sector.

*Source:* compiled by the authors based on data from K. Poliak, O. Polishchuk, A. Valkovets (2022)

Table 1 shows that the healthcare sector in Ukraine faces significant challenges, such as resistance to reforms, high cost of services, poor quality of care, lack of qualified personnel and insufficient financial resources for development. These challenges are exacerbated by environmental problems and

the economic crisis. Changes in the financing system and healthcare management strategies may be necessary to improve the situation and ensure affordable and quality healthcare for citizens.

It is worth noting that one of the significant points of the study is the analysis of the main statistics on COVID-19 (Fig. 1). First of all, this is because COVID-19 has become a major and global crisis factor in the healthcare sector of the 21st century.



**Fig. 1. COVID-19 coronavirus: general statistics for 2020-2024, million cases**

*Source:* compiled by the authors based on data from the Ministry of Finance of Ukraine

<sup>1</sup>2024 – data as of 13.04.2024

According to Figure 1, the incidence of COVID-19 peaked in 2022, which could have been triggered by several negative factors: different variants of the virus strain and their rapid spread, low vaccination rates among the population, and insufficient anti-epidemic measures.

However, in subsequent years, there has been a gradual downward trend, with the number of infected people decreasing by 95% in 2024 compared to 2020 and deaths decreasing by 90%. This is primarily due to the effectiveness of anticrisis management in limiting the spread of COVID-19, which included large-



scale vaccination, quarantine measures, improving the healthcare system, and public education.

In addition, to clearly understand the economic component of the healthcare sector, we analysed the dynamics of funding in 2018-2022 in different countries (Table 2).

*Table 2*

**Healthcare financing, 2018-2022, EUR million**

<b>Country</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>Relative deviation 2022 to 2018</b>
	(EUR, mln)					(%)
Germany	386371,0	406910,00	432236,00	465855,00	489364,00	21,3
Italy	153790,00	155524,00	159880,00	167761,00	171867,00	10,6
Hungary	8952,28	9206,08	10057,80	11367,56	11472,31	25,3
Slovakia	5991,41	6534,21	6659,30	7776,08	-	-
Sweden	51496,64	51655,66	54461,32	60542,95	59470,35	15,2
Estonia	1735,20	1892,72	2081,59	2355,40	2543,20	37,5
Denmark	30528,07	31424,46	32922,76	36446,54	35715,15	14,1
Ukraine	2709,37	3757,69	3805,71	5554,83	5046,15	47,6

*Source:* compiled by the authors based on data from Eurostat ra Slovaidilo (2022)

When analysing healthcare funding in Ukraine and other countries, we note that it is the lowest among the countries presented. This is primarily due to a lack of funding and insufficient attention to the healthcare system by the authorities. Insufficient resources can lead to deficiencies in medical equipment, low remuneration of medical staff, limited access to quality healthcare, and a general deterioration in the healthcare system.

However, it should be noted that in 2022, compared to 2018, funding increased by 47.6%, which will help improve the quality of healthcare. However, this funding is still insufficient to reach the European level. Thus, to improve the situation, it is necessary to increase funding and efficiently use available resources in the medical sector.



It is worth noting that one of the key economic characteristics of the healthcare sector is its efficiency. The definition of healthcare efficiency should be considered from the following perspectives:

- effectiveness of healthcare as a social system that contributes to the development of the country's economy by increasing or preserving labour resources and improving their quality;
- effectiveness of individual measures (projects, programmes) to reduce or prevent morbidity, family planning, environmental improvement, etc;
- efficiency of the use of system resources.

In the process of studying healthcare effectiveness, the relevant criteria and system of indicators should be identified. It should be reminded that criteria is a principle of efficiency assessment, and an indicator is a model of quantitative characterisation of a phenomenon. An increase in life expectancy may be a criterion for the effectiveness of the public healthcare system. The main generalising aspects of health are life expectancy and quality of life.

Among the indicators of healthcare efficiency, it is advisable to distinguish those that characterise the external effect (social and economic) and the internal (medical). It is understood that the former reflects the impact of healthcare services on social production and living conditions, while the latter characterises the performance of healthcare institutions within the sector. The scheme for analysing the effectiveness of the healthcare system is shown in Table 3.

*Table 3*

**Scheme for analysing the efficiency of the healthcare system**

Effect	Healthcare system	Individual projects, events	Activities of medical institutions
Social	Life expectancy; Number of lives saved; Birth rate; Mortality; Natural increase.	Life expectancy; Mortality; Mortality by age and occupational groups.	Morbidity, disability and mortality in the service area
Economical	Premature mortality; Disability; Residual working capacity;	Premature mortality; Disability; Residual working capacity;	Ability to work; Disability; Indicators of the use of

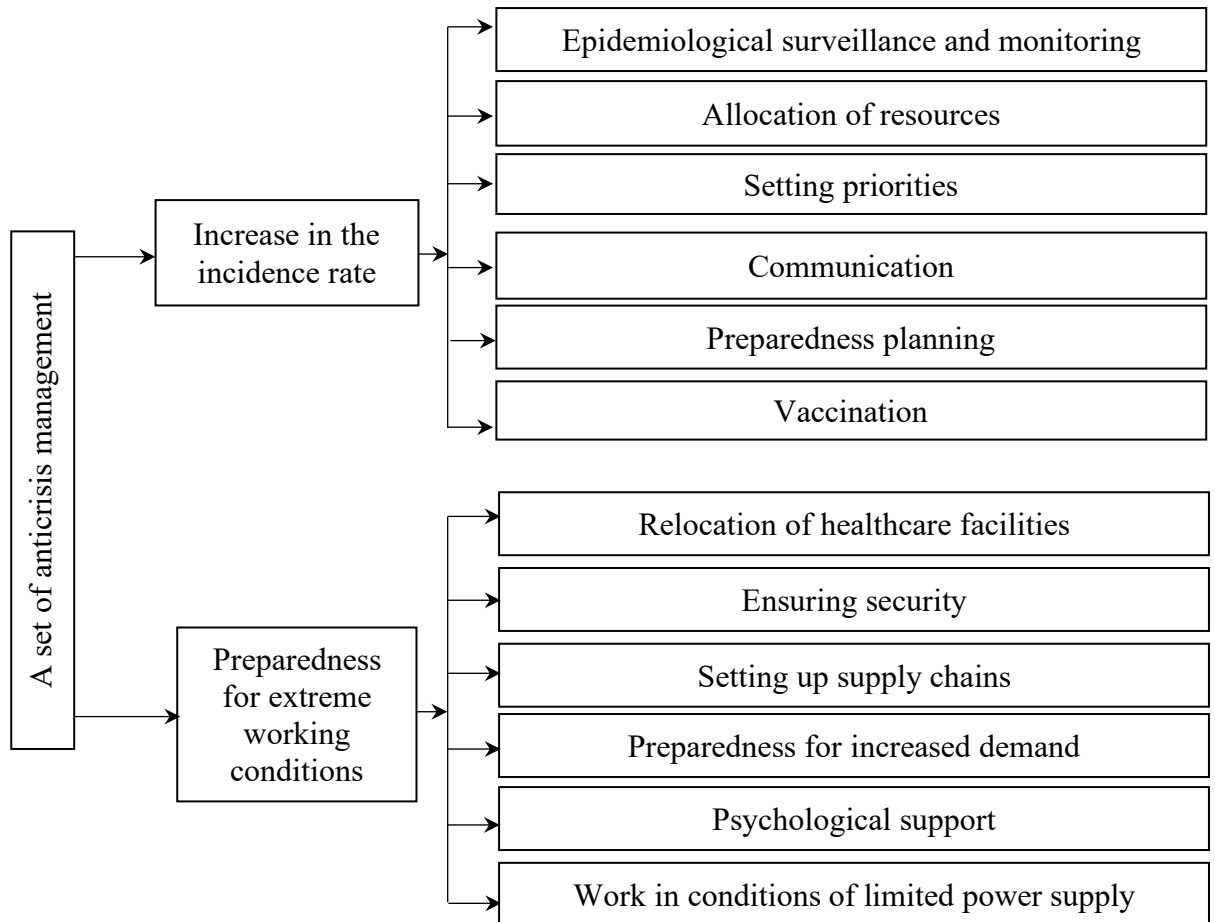
	Restoration of labour resources; Healthcare costs.	The cost of additional product; Programme costs.	material and technical resources; Costs; Profitability indicators.
Medical	"Health Index"; Incidence rates by individual groups; Physical development; Quality of medical care.	Number of exacerbations of chronic diseases; Number of complications; The number of diseases that have become chronic.	"Health index" in the service area; Dynamics of the level of certain diseases; Provision of medical care.

*Source:* compiled by the authors based on data from T.M. Nosulych (2013)

Based on the data presented in Table 3, we can summarise that the social effect is reflected in improved health and increased life expectancy. In turn, the economic effect is manifested in the preservation of working time and increased productivity of social labour. The indicators may include premature death and the corresponding loss of output; the number of lives saved in the working age, disability and its dynamics, an increase in output due to a reduction in working time, and the cost of healthcare measures compared to the corresponding volume of services provided. The medical effect is also characterised by the level of morbidity, its dynamics, and the quality of medical care.

Given the three-vector nature of healthcare system efficiency, it becomes obvious that there is a need to define at least the same requirements for healthcare system management in the context of achieving sustainable development.

As part of anticrisis management, healthcare institutions take a set of actions, which are presented in Figure 2.



**Fig. 2. A set of actions for anticrisis management in the healthcare sector**

*Source:* compiled by the authors based on data from I. L. Sazonets and I. Ya. Zyma (2018)

According to V.F. Savchenko (2016), the main tasks of anticrisis management are:

- timely diagnosis of the pre-crisis state and forecasting of crisis phenomena;
- elimination of insolvency, formation of financial stability of the enterprise, minimisation of the consequences of the financial crisis;
- preventing a decrease in investment attractiveness, reduction of own funds for financing production and economic activities, attraction of significant funds that may lead to financial difficulties or a financial crisis;
- monitoring and continuous analysis of the company's personnel policy, taking measures to reduce staff turnover and form a stable permanent staff;
- analysis of deviations in the company's innovation activity;

- ongoing research of the company's sales activities and timely response to significant deviations.

It is worth noting that one of the most important tools of anticrisis management is a roadmap – a competent and accurate visualisation of the company's development strategy, project development and product promotion stages.

As noted in *Doing Business*, the term roadmap has only recently appeared in the economists' vocabulary, along with US political, economic, and educational programmes. A roadmap is a strategic planning technique that places the goals and key deliverables of a project on a timeline, grouped in a single visual representation or graph. Always keep in mind that a roadmap differs from a conventional project plan in that it does not contain all the details of the project; instead, it is a high-level strategic tool that is easy to understand.

In his research, Daniel Burrus (2018) notes that several points should always be considered when planning a roadmap. After all, if you miss one of them, it will be difficult to make the map more conceptual:

1. Gathering data on resources, opportunities, and constraints to understand what can be done. This includes analytical and statistical information that has been accumulated previously.

2. Identifying development vectors and developing a concept for each of them that will help achieve the goal.

4. Assessing opportunities and risks for each concept to understand which development vector is most appropriate.

5. Communication and execution. Working with the team, participants, and stakeholders, as well as tracking and implementing the plan.

It should be noted that depending on the objectives of the roadmap, the steps may vary, but they should cover all key aspects of its creation.

Taking the above into account, it was decided to develop an example of a roadmap that will include the fundamental stages that any organisation goes through in the process of anticrisis management (Fig. 3).

This example can serve as a basis for the development of a full-fledged roadmap by the organisation's specialists or outsourced employees, which will cover the main needs and details of a particular area of activity.

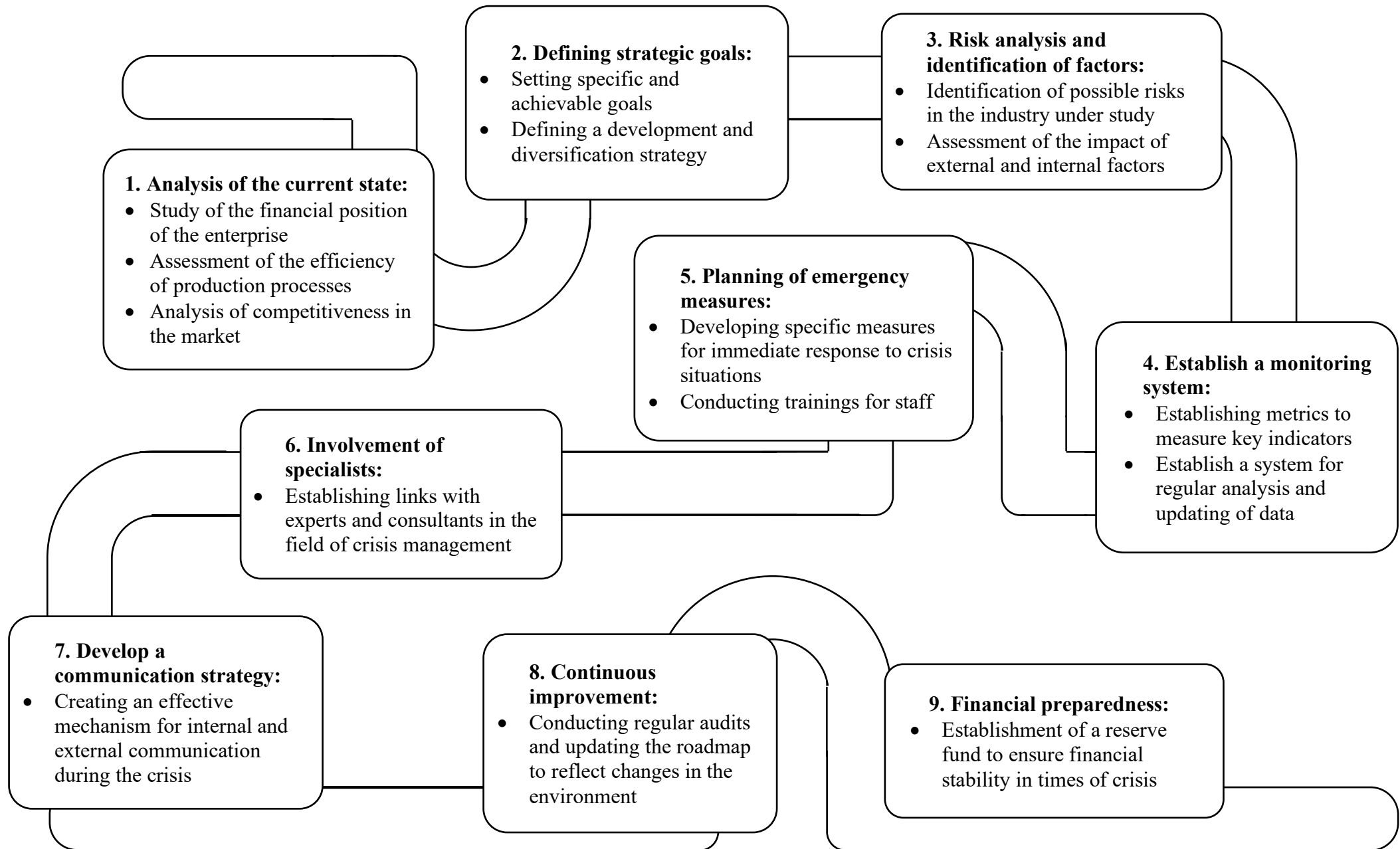
It is also important to consider the need for this development because without a clear understanding of the value and benefits of the roadmap, the company can only lose time and resources. Therefore, first of all, you need to know that a roadmap has several advantages: increased efficiency, reduced risks, optimised use of resources, easier decision-making, and better coordination of different departments.

The development and implementation of a roadmap for the healthcare sector will benefit by:

- a) Fostering collaboration among various stakeholders;
- b) Streamlining processes to enhance efficiency;
- c) Ensuring equitable access to quality healthcare services, leveraging technological advancements for improved patient care and management;
- d) Achieving better health outcomes for all individuals within the population.

Visual roadmaps not only serve as a guide for everything the healthcare sector is focusing on but are also very useful for:

- a) Facilitating communication and understanding among stakeholders;
- b) Visually highlighting key milestones and priorities;
- c) Identifying dependencies and potential bottlenecks;



**Fig. 3. Roadmap of anticrisis management**

Source: compiled by the authors based on own development

- d) Enabling better resource allocation and budget planning;
- e) Promoting transparency and accountability in the implementation of healthcare initiatives.

Thus, the roadmap will include a significant amount of work in the field of diagnostics and forecasting, processing of relevant information at enterprises, implementation of the most effective projects, as well as the use of standard administrative control methods.

We believe that the relevance of the issue of developing and implementing a roadmap for anticrisis management in the healthcare sector is justified. After all, a roadmap for the healthcare sector can serve as a kind of instruction for overcoming possible crisis situations and have a list of measures to be taken to prevent a crisis.

**Conclusions and prospects for further research.** To summarise, paying sufficient attention to the development of an anticrisis management roadmap will allow you to anticipate possible risks, plan the necessary measures and resources to address them, and create conditions for the effective implementation of planned strategies in the event of a crisis.

It is important to understand that the anticrisis management roadmap should be flexible and adapted to the specific conditions and needs of the healthcare system. It should combine both general principles of anticrisis management and specific measures and strategies aimed at overcoming specific challenges faced by the sector.

Thus, the development and implementation of an anticrisis management roadmap is an integral part of building a sustainable and efficient healthcare system that can effectively respond to unforeseen situations and ensure the safety and well-being of citizens.



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