



Doctoral School in the Field of Medical Sciences

By way of manuscript
C.Z.U: [616.98:578.834.1]-036.21:614.2(478)(043.2)

DANIELA DEMISCAN

**COORDINATION OF RESPONSE MEASURES TO THE
COVID-19 PANDEMIC AT THE TERRITORIAL LEVEL**

331.03 - SOCIAL MEDICINE AND MANAGEMENT

Summary of the doctoral thesis in medical sciences

Chisinau, 2026



The thesis was developed within the School of Public Health Management

Scientific supervisor:

Lozan Oleg, PhD, MD, University Professor.,
director of the School of Public Health Management

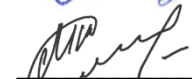


Members of the supervisory committee:

Gheorghita Stela- PhD, MD.,
WHO Country Office Kazakhstan



Pisla Mihai – PhD, MD, associate professor,
School of Public Health Management



Boshevska Golubinka, PhD, MD,
"Goce Delchev" University, Republic of North Macedonia



The defense will take place on 22.04.2026, at 14.00 at the premises of the "Nicolae Testemitanu" University of Medicine and Pharmacy, 165 Stephen the Great and Holy Boulevard, office 205 in the meeting of the Commission for the public defense of the doctoral thesis, approved by the decision of the Scientific Council of the Consortium dated March 2, 2026 (*minutes no.3*).

Composition of the Public Doctoral Thesis Defense Committee:

Ciocanu Mihail, Doctor Habilitated of Medical Sciences,
University Professor, Nicolae Testemitanu State University of Medicine and Pharmacy,
School of Public Health, **Chair**



Lozan Oleg, Doctor Habilitated of Medical Sciences,
University Professor, Public Association
"National School of Public Health Management" Doctoral Supervisor



Gheorghita Stela, PhD in Medical Sciences,
WHO Country Office Kazakhstan, Reviewer, member of the supervisory committee



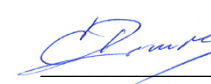
Gilca Boris, PhD in Medical Sciences, Associate Professor,
Director for Strategic Development, Avangard-Med, Reviewer



Belobrov Angela, PhD in Economic Sciences, Associate Professor,
Academy of Economic Studies of Moldova, Reviewer



Rimis Constantin, PhD in Medical Sciences,
Health promotion expert, "Healthy Life" Project, Reviewer



Paraschiv Angela, Doctor Habilitated of Medical Sciences, Associate Professor,
Nicolae Testemitanu State University of Medicine and Pharmacy,
Discipline of Epidemiology, Reviewer



Author:

Demiscan Daniela



CONTENTS

INTRODUCTION	4
2. RESEARCH METHODOLOGY	7
2.1 Study design	7
2.2 Study population and sample	7
2.3 Data analysis and statistical methods.....	7
3. RESEARCH RESULTS	8
3.3. Triangulation of quantitative and qualitative results	13
3.4. Validation of assumptions.....	13
3.5. Novelty and originality of the scientific results obtained	14
3.6. Analysis of the determinants of coordination	14
4. DISCUSSIONS AND IMPLICATIONS FOR COORDINATION MECHANISMS IN PUBLIC HEALTH EMERGENCIES	15
4.3. SWOT analysis of coordination mechanisms	18
4.4. Analysis of performance standards and indicators of achievement.....	19
4.5. Evaluation of coordination in public health.....	21
CONCLUSIONS	22
RECOMMENDATIONS	23
BIBLIOGRAPHY	24
LIST OF PUBLICATIONS AND PARTICIPATION IN SCIENTIFIC FORUMS	24
ADNOTAREA	27
ANNOTATION	28

INTRODUCTION

The relevance and importance of the topic addressed. The crisis generated by COVID-19 represented one of the most significant public health challenges of the recent period, profoundly affecting population health, economies, and social systems worldwide.[1] .

On January 30, 2020, the WHO declared the situation a Public Health Emergency of International Concern, according to the 2005 RSI, based on the fact that at that time, 7,818 cases of infection with the new coronavirus were confirmed globally in 19 states [2] .

On March 11, 2020, WHO characterized the situation as a pandemic, considering the rapid global spread of the virus and its major impact on public health systems worldwide. [3] .

In the Republic of Moldova, the first confirmed case of infection with the novel coronavirus was registered on March 7, 2020. The onset of the COVID-19 pandemic placed considerable pressure on the national health system, forcing authorities to adopt rapid response measures and reorganize available resources. From the establishment of the focal point within the Ministry of Health, Labour and Social Protection to the convening of the Extraordinary Commission for Public Health and the implementation of quarantine and COVID-19 vaccination measures, authorities were required to respond promptly to the evolving epidemiological situation. These interventions reflected both the challenges encountered and the health system's capacity to adapt to new epidemiological conditions.

With the aim of adjusting and improving the strategies for monitoring and managing public health emergencies, it is necessary to analyze in the context, methods and coordination mechanism of response measures to the COVID-19 pandemic at territorial level in the Republic of Moldova. The analysis of these experiences strongly contributes to strengthening the resilience of the health system and its capacity to cope with other public health emergencies [4] .

Discussions on health system resilience and emergency management often emphasize the importance of coordination and partnership within government and with other stakeholders. However, both coordination and partnership have been identified as areas that require further research.[5]

If in the case of natural disasters, a lack of coordination can delay the prompt intervention necessary to save human lives and the distribution of vital resources, in the case of pandemics the lack of inter-institutional coordination has even more serious consequences, affecting entire populations and nations by delaying the response and diminishing the capacity to mitigate the effects of the health crisis. Studies show that effective coordination between different levels of government and sectors of society can significantly improve the response capacity to public health emergencies, reducing the negative impact on affected communities.

In the current context, the study of COVID-19 response coordination mechanisms provides valuable lessons for managing other emerging global health threats, such as new pandemics, climate change crises, and risks associated with emerging infectious diseases. Consequently, assessing the strategies applied during the pandemic and integrating them into future preparedness and response plans is a key priority for public health policymakers.

The coordination of response measures is essentially a process of managing public health emergencies, involving the planning, organization, implementation and evaluation of decisions at territorial level.

In the national scientific literature, approaches to managing the coordination of the response to public health emergencies at the territorial level are limited, fragmentary and predominantly descriptive. There is a lack of in-depth analyses on the interaction between the central (CNESP)

and territorial (CTESP) structures, as well as systematic assessments of decision-making efficiency in the implementation of anti-pandemic measures. This gap is all the more relevant in the context of the Republic of Moldova, where coordination challenges have highlighted the need for a unitary and functional framework of local governance in public health. This thesis aims to respond to this need by comprehensively investigating the dimensions of coordination and management, thus contributing to the consolidation of a solid theoretical base of scientific knowledge applicable in public health policies.

Purpose of the research:

Analysis and evaluation of the functionality of the Extraordinary Territorial Public Health Commission on the implementation of response measures to the COVID-19 pandemic, in order to develop recommendations for improving the coordination mechanisms in case of public health emergencies.

Objectives:

1. Analysis of international practices and recommendations on COVID-19 response measures.
2. Identification and analysis of theoretical models for coordinating public health emergencies (centralized, decentralized, hybrid) as the foundation of the research methodological framework.
3. Analysis of coordination mechanisms implemented at national level in the Republic of Moldova.
4. Evaluation of the functionality of the Extraordinary Territorial Public Health Commissions in implementing response measures to COVID-19.
5. To develop recommendations to improve coordination mechanisms in case of public health emergencies.

Research hypothesis:

The efficiency of coordination of response measures to the COVID-19 pandemic at the territorial level in the Republic of Moldova was influenced by the quality of coordination mechanisms, the clarity of hierarchical and functional relationships between CNESP and CTESP, local administrative capacity, and the flexibility of adapting measures to the territorial context.

Secondary hypotheses:

Hypothesis 1: Insufficiencies in the legislative and regulatory framework and weaknesses in control mechanisms generate inconsistencies in the implementation of measures at the territorial level.

Hypothesis 2: The level of intersectoral cooperation and community involvement influenced the effectiveness of implementing public health measures.

Hypothesis 3: The capacity to adapt measures to the local context and the experience accumulated through institutional learning during the period 2022–2024 contributed to improved perceptions of coordination efficiency and strengthened the resilience of the response system.

Original contribution of the research: The present research represents one of the first systematic analyses of the interactions between central structures (CNESP) and territorial structures (CTESP) in managing the COVID-19 pandemic in the Republic of Moldova. The study uses a mixed methodological approach (quantitative and qualitative) and a longitudinal research

design (2022–2024), allowing the evaluation of the evolution of coordination mechanisms over time.

The research contributes to identifying and analyzing the factors influencing the efficiency of intersectoral coordination at the territorial level in the context of public health emergencies and to the development of a conceptual coordination model adapted to the institutional context of the Republic of Moldova.

Approval of the results: The research methodology and study design were evaluated and approved during the meeting of the Research Ethics Committee of Nicolae Testemițanu State University of Medicine and Pharmacy, minutes no. 1 of July 5, 2023, and at the meeting of the School of Public Health Management, minutes no. 12 of July 4, 2025.

Presentation of research results: Based on the thesis material, 3 articles were published in indexed international scientific journals (ISI/Web of Science, Scopus), 3 articles in reviewed international journals, 2 articles in accredited national scientific journals (category B), 4 papers published in the volumes of scientific conferences, as well as 8 participations with communications and posters at national and international scientific forums.

Also, 2 innovator certificates and 2 acts of implementation of scientific results were obtained.

Thesis structure: The thesis is structured in **110** pages including: introduction, 4 chapters, 152 bibliographic sources, CV, 5 tables and 18 figures. The results obtained are published in 11 scientific papers.

Keywords: COVID-19, public health emergency, coordination, coordination mechanisms, pandemic response, CTESP, CNESP, local public authorities, crisis management.

2. RESEARCH METHODOLOGY

2.1 Study design

The research employed a mixed-methods design (quantitative–qualitative) to analyze the coordination mechanisms of the response to the COVID-19 pandemic at the territorial level in the Republic of Moldova.

The quantitative component targeted the entire population of 310 members of the Territorial Extraordinary Commissions for Public Health (CTESP). Data collection was conducted in two waves through the application of the same standardized questionnaire: 293 respondents in 2022 (response rate 94.5%) and 252 respondents in 2024 (response rate 81.3%).

The qualitative component included semi-structured interviews with 8 members of the National Extraordinary Commission for Public Health (CNESP) and 10 CTESP chairpersons, as well as a focus group with 10 CTESP secretaries.

The study falls within the category of repeated cross-sectional observational studies (2022–2024).

2.2 Study population and sample

The study targeted the entire population of 310 CTESP members in the Republic of Moldova, actively involved in the response to the COVID-19 pandemic, ensuring a high level of representativeness of the results.

Data were collected through the application of the same questionnaire at a two-year interval:

1. First round: 2022 – 293 respondents (response rate: 94.5%)
2. Second round: 2024 – 252 respondents (response rate: 81.3%)

Inclusion and exclusion criteria

Inclusion criteria:CTESP members with direct experience in implementing public health measures during the pandemic period.

Exclusion criteria:Incomplete or unvalidated questionnaires.

Type of collected data

The questionnaire included multiple-choice responses and evaluation scales ranging from 0 to 10.

Methodology for score grouping

Scores were grouped into three categories in order to allow a nuanced interpretation of perceptions:

- **Scores 0–3:** predominantly negative perception / strong disagreement
- **Scores 4–7:** neutral zone / moderate position
- **Scores 8–10:** strongly positive perception / substantial agreement

2.3 Data analysis and statistical methods

The collected data were processed using descriptive and inferential statistical methods, including:

- frequency distributions;
- chi-square tests for comparing proportions;
- Mann–Whitney tests for assessing statistical significance of differences between periods;
- Spearman correlation coefficients for evaluating associations between variables.

3. RESEARCH RESULTS

3.1. Clarity of recommended public health measures

The evaluation of the clarity of recommended public health measures indicates a predominantly positive and stable perception among respondents. Approximately 87% of respondents considered the measures to be clear in 2022 (87.5%), a proportion that remained almost unchanged in 2024 (86.9%). The statistical differences are not significant ($\chi^2 = 0.189$, $df = 2$, $p = 0.910$), suggesting consistency in the official communication of public health directives.

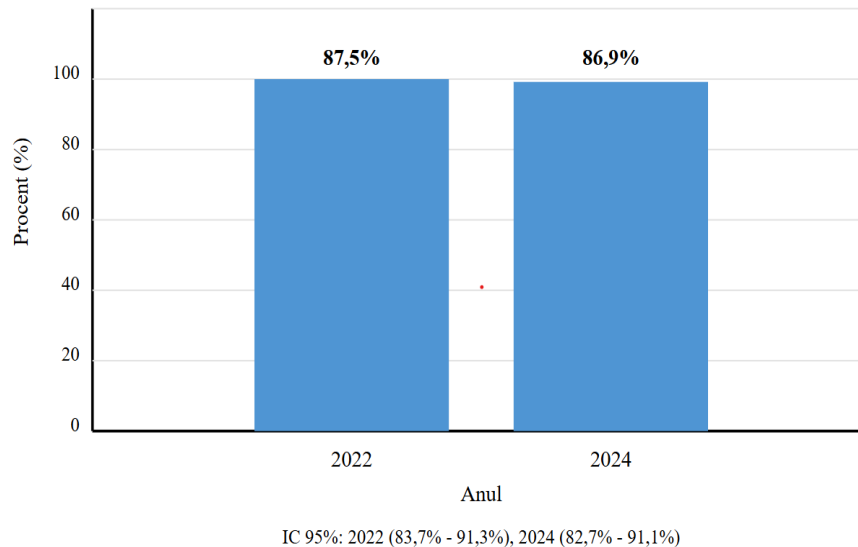


Figure 1. CTESP members' perceptions of the clarity of recommended public health measures for COVID-19 in the Republic of Moldova (2022 vs. 2024), %,

Source: own elaboration

Results with 95% Confidence Interval (95% CI):

• Clarity of measures:

- 2022: 87.5% (95% CI: 83.7% - 91.3%)
- 2024: 86.9% (95% CI: 82.7% - 91.1%)

Effect size:

Cohen's $d = 0.17$ (Small effect, indicating a small difference between perceptions in 2022 and 2024) The high consistency of positive perceptions regarding the clarity of measures suggests the effectiveness of institutional communication, both during the pandemic and in retrospect. The data indicate that, despite the complexity of the epidemiological situation and the rapid evolution of scientific knowledge about SARS-CoV-2, the authorities have managed to develop and transmit recommendations that are understandable to local decision-makers.

3.1.1. Insufficiency of the legislative-normative basis

In contrast to the predominantly positive perceptions regarding the existence of the plans and the clarity of the measures, the analysis of the evaluations on the insufficiency of the legislative-normative basis reveals a marked critical trend. The data are presented in tabular form to allow precise comparison of percentage values and to highlight the exact differences between the two measurement periods.

Table 1. Percentage distribution of CTESP members' scores on the insufficiency of the legislative-normative basis for the management of COVID-19 in the Republic of Moldova (2022 vs. 2024)

Score Group	2022 (%)	2024 (%)	Difference (pp)
Low Scores (0-3)	21,8	15,2	-6,6
Average Scores (4-7)	25,5	25,5	0
High Scores (8-10)	52,7	59,3	+6,6

The Mann-Whitney test indicates significant differences between the distributions in 2022 and 2024 ($U=34862$, $p=0.021$), with a trend of increasing critical assessments in the recent period. The average score increased from 6.82 (SD=3.12) in 2022 to 7.34 (SD=2.91) in 2024, and the median from 8 (IQR: 5-9) in 2022 to 9 (IQR: 6-10) in 2024.

These data suggest an increasingly critical perception of the legislative-normative framework, with an accentuation of negative evaluations in the post-pandemic period. The significant increase in the proportion of high scores indicates that, in retrospect, respondents are more clearly identifying legislative gaps that have made it difficult to effectively coordinate the pandemic response.

3.1.2. Control over CTESP activity

The analysis of perceptions regarding insufficient control over CTESP activity highlights a marked critical trend, with a positive asymmetric distribution of scores in both periods analyzed.

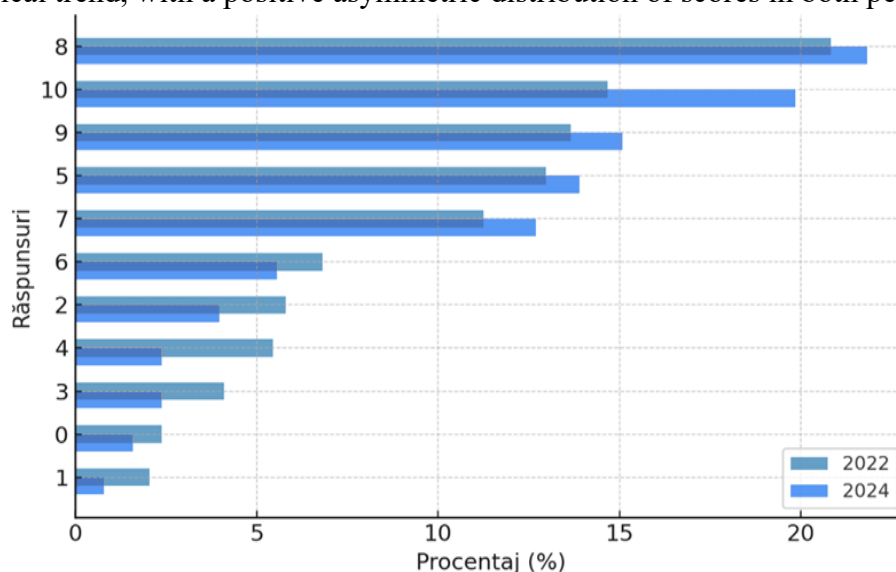


Figure 2. Distribution of CTESP members' scores on insufficient control over CTESP activity in the Republic of Moldova (2022 vs. 2024), %, Source: own elaboration.

The distribution of responses reveals a marked polarization, with a significant concentration in the area of high values. High scores (8-10) register a sustained increase from 47.3% in 2022 to 56.4% in 2024, representing an absolute majority of respondents who perceive major deficiencies in the control system.

Low scores (0-3) show a notable decrease from 22.1% to 14.3%, indicating that fewer and fewer respondents believe that control mechanisms are working adequately. This trend is

reinforced by the relative stability of the average scores (4-7), which remain at around 30% in both periods.

The Mann-Whitney test confirms the statistical significance of these differences ($U=33721$, $p=0.008$), with a clear trend of increasing critical assessments in 2024. The average score increased by 0.65 points, from 6.53 ($SD=3.26$) in 2022 to 7.18 ($SD=3.01$) in 2024, and the median moved from 7 to 8, indicating a deterioration in general perceptions.

These results suggest that the temporal distancing from the acute period of the pandemic allowed for a more critical assessment of control and supervision mechanisms. The 9.1 percentage point increase in high scores, correlated with the proportional decrease in low scores, indicates a crystallization of a critical perspective on the effectiveness of the CTESP activity monitoring system at territorial level.

3.1.3. Responsibility of CTESP members

The assessment of the low responsibility of CTESP members shows an evolutionary pattern similar to that observed for insufficient control, highlighting a progressive deterioration of perceptions in the post-pandemic period.

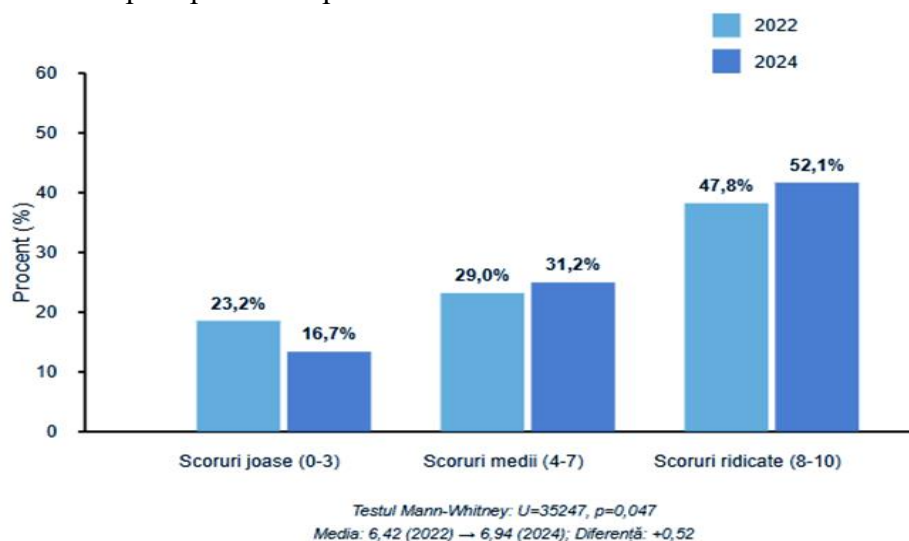


Figure 3. Perceptions of CTESP members regarding the low accountability of CTESP members in the Republic of Moldova, by score groups (2022 vs. 2024), %,

Source: own elaboration

The analysis of the distribution by categories reveals significant changes in the structure of the responses. High scores (8-10) register a steady increase from 47.8% in 2022 to 52.1% in 2024, reaching the threshold of absolute majority and indicating that more than half of respondents perceive serious problems in the level of responsibility of CTESP members.

Low scores (0-3) show significant erosion, decreasing by 6.5 percentage points from 23.2% to 16.7%, suggesting that fewer and fewer respondents believe that CTESP members assume responsibilities consistently. This trend is partially offset by a moderate increase in average scores (4-7) by 2.2 percentage points, indicating a gradual polarization of opinions.

From a statistical perspective, the Mann-Whitney test confirms the marginal significance of these changes ($U=35247$, $p=0.047$), being at the conventional threshold of statistical significance. The average scores show a substantial increase of 0.52 points, from 6.42 ($SD=3.31$) in 2022 to 6.94 ($SD=3.09$) in 2024, reinforcing the critical trend observed.

The temporal context of this development is particularly relevant. Distancing themselves from the acute period of the pandemic allowed respondents to develop a more critical analysis of institutional performance. This post-factum evaluation suggests that as the immediate pressure subsided, the deficiencies in the individual responsibility of CTESP members became more evident and more critically assessed.

The results indicate an increase in the critical assessment on the responsibility of CTESP members in the period 2024 compared to 2022.

3.1.4. General assessment of the coordination mechanisms

Analysis of the general assessments of the coordination mechanisms indicates a significant redistribution of perceptions between the two periods.

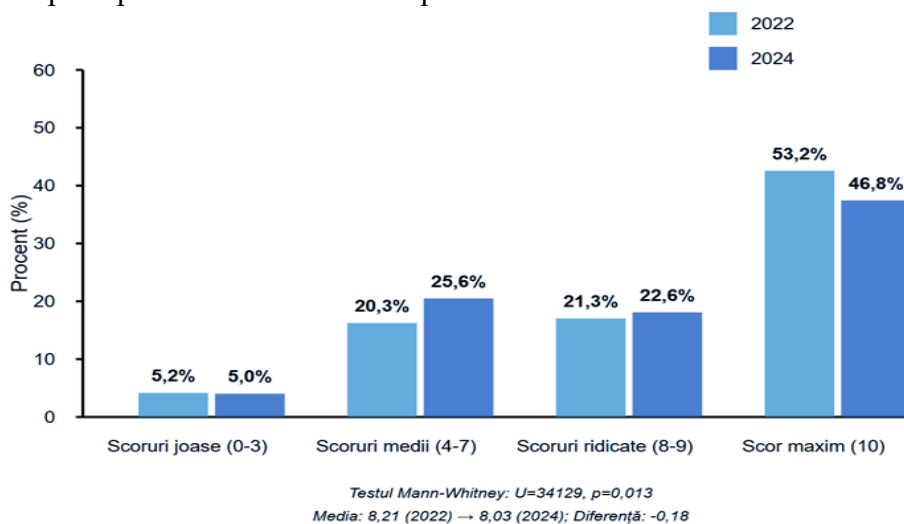


Figure 4. Perceptions of CTESP members regarding the overall assessment of coordination mechanisms in the Republic of Moldova, by score groups (2022 vs. 2024), %,

Source: own elaboration

The maximum score (10) registers a notable decrease of 6.4 percentage points, from 53.2% in 2022 to 46.8% in 2024, indicating a moderation in initial enthusiasm.

High scores (8-9) show moderate growth by 1.3 percentage points, while average scores (4-7) see the most significant increase by 5.3 points, suggesting a more nuanced and critical outlook.

The Mann-Whitney test confirms the significance of these changes (U=34129, p=0.013), highlighting a statistically relevant evolution in perceptions. Although the average of the scores remains in the area of positive evaluations, the decrease from 8.21 to 8.03 reflects this general moderation.

This redistribution can be interpreted as a maturation of the post-pandemic perspective, when respondents have developed a more balanced and realistic view of the performance of the coordination system.

3.1.5. Correlations between the variables analyzed

The analysis of the bivariate correlations between the main variables investigated highlights significant associations, which provide insight into the interconnections between the different aspects of the coordination of pandemic response measures.

Table 2. Spearman correlation coefficients between CTESP members' perceptions of coordination mechanisms in the Republic of Moldova (combined data 2022-2024)

Variable	Insufficiency of the legislative-normative basis	Insufficient control	Low Accountability	General assessment
Insufficiency of the legislative-normative basis	1,000	0,701**	0,472**	-0,669**
Insufficient control	0,701**	1,000	0,512**	-0,669**
Low Accountability	0,472**	0,512**	1,000	-0,485**
General assessment	-0,669**	-0,669**	-0,485**	1,000

** $p < 0.01$

There are significant positive correlations between perceptions of the insufficient legislative base, insufficient control over the CTESP and the low accountability of their members. The strongest association ($\rho = 0.701$; $p < 0.0001$) is recorded between the insufficiency of the legislative base and insufficient control, followed by the correlation between insufficient control and low accountability ($\rho = 0.512$; $p < 0.0001$).

The moderate negative correlations between these variables and the overall assessment (ρ ranging from -0.485 to -0.669) confirm that perceptions of institutional weaknesses negatively influence the overall assessment of the coordination mechanisms. These results suggest that improving the legislative framework, control systems and accountability of institutional actors could significantly contribute to optimizing coordination in public health emergencies.

3.2. Qualitative analysis of coordination mechanisms

The qualitative analysis was carried out based on in-depth interviews with CNESP members and CTESP presidents, as well as the focus group organized with CTESP secretaries. The data were analyzed using the thematic analysis method, identifying several conceptual categories relevant to the functionality of the coordination mechanisms.

The results highlighted the existence of structural difficulties in the coordination process, related to the ambiguity of the delimitation of responsibilities between the national and territorial levels, variations in the interpretation and application of the measures established at central level, sometimes late or insufficiently clear communication between the structures involved and the decision-making pressure exerted in conditions of epidemiological uncertainty.

The participants stressed that the efficiency of coordination was significantly influenced by the managerial experience of CTESP leaders, the level of intersectoral collaboration at local level and the institutional capacity existing before the pandemic.

The focus group with CTESP secretaries highlighted operational issues such as the frequency of changes in decisions, the need to adapt quickly to regulatory changes and the difficulties of monitoring the implementation of measures at local level.

At the same time, the analysis also revealed positive elements, including the capacity for institutional mobilization, the strengthening of intersectoral cooperation and the development of adaptive practices that have contributed to increasing institutional resilience in the post-pandemic period.

The qualitative results complemented the quantitative data, providing an in-depth insight into the decision-making processes and contextual factors that influenced the functionality of the coordination mechanisms.

3.3. Triangulation of quantitative and qualitative results

The methodological triangulation was achieved by integrating the results obtained from the quantitative analysis with those derived from the in-depth and focus-group interviews, aiming to strengthen the validity and robustness of the research conclusions.

The results showed a significant convergence between the two dimensions of the analysis. The quantitative data indicated statistical associations between the perception of the effectiveness of coordination and variables such as the clarity of the regulatory framework, the responsibility of the CTESP members and the level of control over the implementation of the measures. These findings were confirmed by the qualitative analysis, with participants repeatedly stressing the importance of clear delineation of tasks and effective communication between national and territorial levels.

At the same time, triangulation allowed the identification of contextual nuances that were not fully captured by quantitative tools. For example, although the statistical analysis highlighted a trend of improving the perception of coordination in 2024, interviews revealed that this evolution is attributed to the accumulation of experience and informal adaptation of institutional practices, rather than to structural changes in the regulatory framework.

The integration of the two types of data allowed the formulation of an explanatory model of the coordination mechanisms, in which the efficiency of the response to emergency situations is determined by the interaction between normative, organizational and experiential factors.

By applying methodological triangulation, the research went beyond the limits of a one-dimensional analysis, providing a comprehensive and grounded interpretation of the institutional coordination processes in the pandemic context.

3.4. Validation of assumptions

Based on the integrated analysis of quantitative and qualitative data, the evaluation of the main hypothesis and the secondary hypotheses formulated during the research was carried out.

The main hypothesis, according to which the efficiency of the mechanisms for coordinating the response to public health emergencies is influenced by the clarity of the regulatory framework, the level of inter-institutional communication and the delimitation of responsibilities between administrative levels, has been confirmed.

The results of the statistical analysis demonstrated the existence of significant associations between the perception of the effectiveness of coordination and variables such as the clarity of the measures adopted, the level of control over the implementation of decisions and the responsibility of CTESP members. Logistic regression models have highlighted the predictive role of these factors in the overall assessment of the functionality of coordination mechanisms.

Secondary assumptions regarding the existence of differences between the active period of the pandemic (2022) and the post-pandemic phase (2024) have been partially confirmed. The comparative analysis highlighted a trend of improving the perception of coordination in 2024, associated with the accumulation of institutional experience and the adaptation of operational procedures.

The triangulation of results demonstrated the convergence of quantitative and qualitative data in identifying the main factors influencing the effectiveness of coordination, reinforcing the validity of the conclusions made.

3.5. Novelty and originality of the scientific results obtained

The research represents the first systematic evaluation carried out in the Republic of Moldova of the mechanisms for coordinating the response to public health emergencies at the territorial level, in the context of the COVID-19 pandemic. The scientific novelty of the study lies in approaching institutional coordination from a "bottom-up" perspective, with a focus on the territorial level, where the effective implementation of the measures takes place and where the difficulties in applying the decisions adopted at national level are directly manifested. By using a mixed methodological design and by comparing the data collected at two distinct moments, in 2022 and 2024, the research allowed to highlight the evolution of institutional perceptions, practices and mechanisms, providing a dynamic perspective on the coordination process.

The originality of the approach lies in the identification of the predictive factors of the coordination efficiency by applying logistic regression models and in the integration of quantitative and qualitative results through methodological triangulation, which led to the formulation of an explanatory model of the institutional coordination mechanisms. Within the study, indicators were systematized for the evaluation of the functionality of territorial response structures, constituting an applicative tool for monitoring performance and optimizing decision-making processes in public health emergency situations. By transforming the pandemic experience into an analytical and operational framework, the research contributes to strengthening institutional resilience and developing public health governance in the Republic of Moldova.

3.6. Analysis of the determinants of coordination

The analysis of the quantitative results demonstrated the existence of significant associations between the clarity of the regulatory framework, the delimitation of responsibilities and the perception of the efficiency of coordination mechanisms at territorial level, confirming the decisive role of these factors in the functionality of the response system. Discrepancies were highlighted between the national and territorial levels in terms of control and implementation of measures, which indicate structural vulnerabilities in the coordination process. The comparison of data from 2022 and 2024 revealed a trend of improvement in the perception of coordination, suggesting a process of institutional learning and organizational adaptation in the post-pandemic period. Logistic regression models have identified relevant predictive factors of coordination efficiency, reinforcing the validity of statistical conclusions. The qualitative analysis complemented these results by highlighting the difficulties related to the ambiguity of competences, interinstitutional communication and the absence of standardized operational procedures. The integration of the two types of data by triangulation allowed the formulation of an explanatory model of the mechanisms for coordinating the response to public health emergencies.

4. DISCUSSIONS AND IMPLICATIONS FOR COORDINATION MECHANISMS IN PUBLIC HEALTH EMERGENCIES

The integrated analysis of quantitative and qualitative data allowed the identification of two conceptual models that synthesize the main explanatory mechanisms of the efficiency of coordination in public health emergencies.

4.1. Conceptual models resulting from research

Based on the in-depth analysis of the collected data, two conceptual models are distinguished that synthesize the main findings of the research and provide reference frameworks for optimizing coordination in emergency situations.

Integrated model of effective coordination in public health emergencies

Figure 5 presents a conceptual model built based on the convergences resulting from the triangulation of the data collected in the period 2022-2024. The model proposes that the effectiveness of coordination is not determined by a single element, but results from the interaction between five interdependent dimensions.

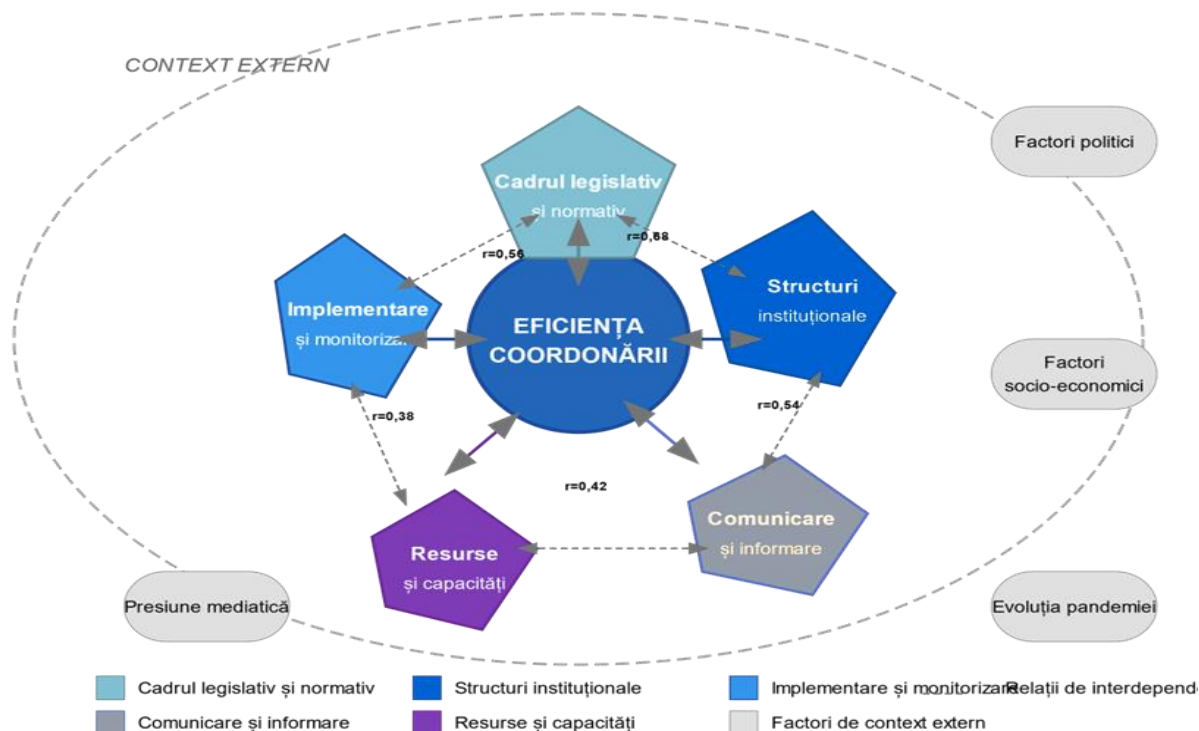


Figure 5. Conceptual model for effective coordination of response to public health emergencies in the Republic of Moldova (based on research results 2022-2024)

Source: own elaboration

This conceptual model highlights five interconnected dimensions of effective coordination:

Legislative and normative framework: It is the foundation of the entire coordination system, including primary, secondary and tertiary legislation, as well as standard operating procedures and action algorithms. The quantitative results highlighted an increasingly critical perception of the sufficiency of the legislative-normative framework in 2024, and the analysis of correlations indicates consistent associations between this dimension and the deficiencies of control and accountability. The qualitative data supplement that finding with recurrent references

to the lack of standardized procedures and the uneven nature of the application of decisions in the territory. The strong correlations identified between the insufficiency of the legislative base and other dysfunctions ($r=0.68$ with insufficient control; $r=0.54$ with low accountability) confirm the central role of this dimension.

Institutional structures: The dimension includes the functioning of the coordinating bodies at national and territorial level, the hierarchical and functional roles and relationships between them, as well as the mechanisms for inter-sectoral collaboration. The results suggest that the central position of CNESP in the institutional architecture facilitated decision-making coherence at national level, but territorial implementation remained dependent on local administrative capacity and clarity of roles.

Communication and information: This dimension covers vertical communication (between national and territorial level) and horizontal communication (between institutions of the same level) and public communication. The quantitative results indicate a predominantly positive perception of the clarity of the measures, suggesting that the institutional messages were generally understandable to actors. However, qualitative data nuance this assessment, highlighting delays, necessary local adaptations and difficulties of implementation in practice, as well as the pressure of disinformation on population compliance.

Resources and capacities: The dimension includes material, financial and human resources, but also the administrative capacity to mobilize and manage them. Qualitative data show that the initial shortage of equipment and logistical constraints negatively influenced the application of the measures, and at the territorial level there were differences in capacity between the administrative-territorial units, including operational coordination resources.

Implementation and monitoring: Includes the translation of decisions into actions, monitoring, control and evaluation mechanisms. At this point, the results indicated a deterioration in perceptions in 2024 regarding control over CTESP and member accountability, with negative associations towards the overall assessment of coordination. Qualitative data converge through mentions of transposed but unimplemented decisions and the lack of standardized supervision and reporting mechanisms.

In the absence of an operationalized regulatory framework (SOPs, algorithms, clear responsibilities) and functional monitoring, the existence of institutional structures and central decisions is not sufficient for uniform implementation at territorial level.

The dynamic model of adaptation of coordination over time

Figure 6 proposes a dynamic model, which describes the variation in the style of coordination during the cycle of a public health emergency, highlighting the gradual transition between centralization and decentralization depending on the phase of the crisis. The model includes four main phases.

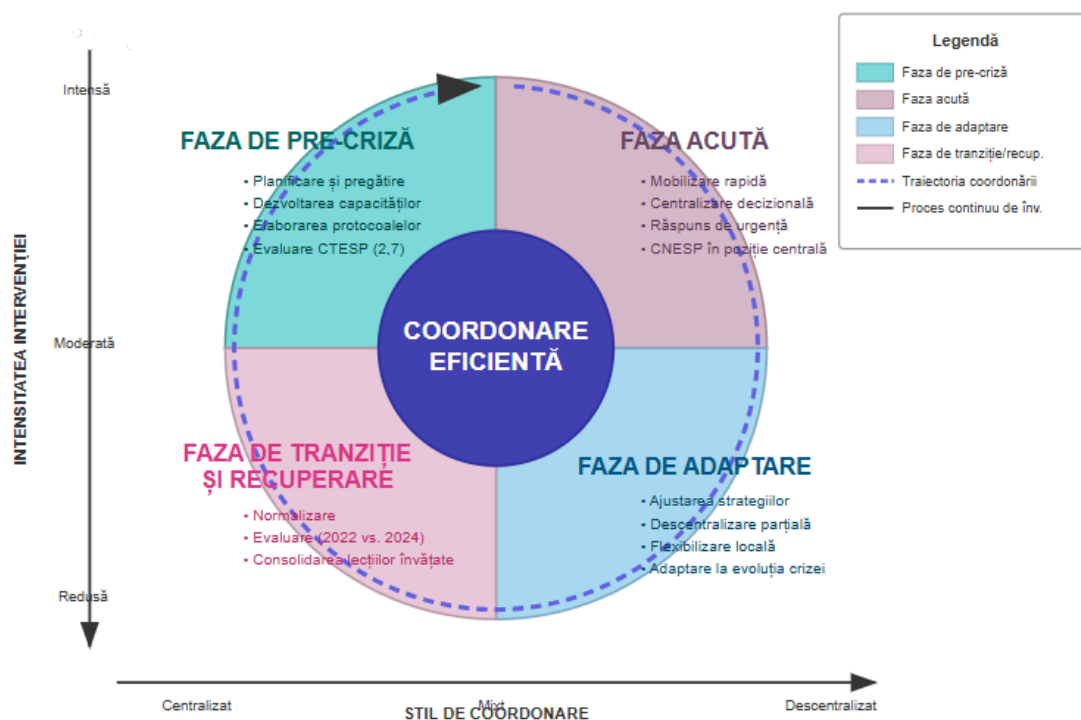


Figure 6. Dynamic model of adaptation of coordination in the phases of the public health emergency - COVID-19 experience in the Republic of Moldova (2022-2024),

Source: own elaboration.

The pre-crisis phase is characterized by planning, training and capacity development, constituting the decisive stage for the speed of activation of the structures and the quality of the initial response. The qualitative data highlighted gaps in pre-pandemic preparedness, including insufficient stocks and unclearly defined procedures, aspects that favored the emergence of institutional improvisation in the early phase of the pandemic.

The acute phase is marked by rapid mobilization and centralization of decision-making, in which coordination at national level becomes predominant, and the standardization of measures contributes to the coherence and speed of the response. The interviews confirmed the central role of CNESP as the main coordination mechanism, supported by multisectoral technical platforms that prepared the substantiation of decisions.

In the adaptation phase, the importance of operational flexibility and adjustment of measures to the territorial specificity increases. Although the strategic orientation remained central, the implementation required local adaptations, confirming the hybrid nature of coordination at this stage.

The transition and recovery phase are characterized by the reduction of the intensity of the intervention, retrospective evaluation and institutionalization of lessons learned. The comparative analysis of perceptions between 2022 and 2024 suggests a maturation of evaluations, with a more pronounced focus on regulatory deficiencies and control mechanisms in the post-pandemic phase.

The model is structured on two analytical axes: the intensity of the intervention and the coordination style, illustrating the transition from a centralized model in the acute phase to a hybrid one, with local adaptation, in the subsequent phases. The circular dynamics of the model reflect the continuous process of institutional learning, suggesting that the effectiveness of coordination

depends on the adequacy of the leadership style to the crisis phase and the ability of the system to integrate the experience gained in strengthening preparedness for future situations.

The model includes two important axes:

- **Vertical axis:** Illustrates the intensity of the intervention (from intense to low).
- **Horizontal axis:** Represents the coordination style (from centralized to decentralized).

The dynamic model thus provides an explanatory framework for the idea that the effectiveness of coordination depends on the fit between the crisis phase and the coordination style (centralized in the acute phase, hybrid with local adaptation in the later phases) against the background of a continuous institutional learning process.

4.2. International benchmarking of coordination mechanisms

The international comparative analysis followed the extent to which the patterns identified in the Republic of Moldova – the initial centralization of decision-making, the normative difficulties, the territorial differences in implementation and the role of resources and communication – are found in states with a comparable administrative profile. Studies on Central and Eastern European countries highlight the predominance of a centralised model in the acute phase of the pandemic, followed by difficulties in harmonizing the relationship between the central and territorial levels, especially in the absence of clear regulatory instruments and standardized procedures.

The experience of the Baltic States and other European countries points to an evolution towards hybrid models, where strategic coordination remains at the central level and implementation is adapted to the local context, supported by digital reporting and monitoring mechanisms. Administrative capacity and the level of digitalization constantly appear in the literature as determinants of coordination efficiency, especially in small and medium-sized countries.

The comparative synthesis confirms that the effectiveness of coordination depends on the clarity of institutional roles, the coherence of the regulatory framework and the capacity for local adaptation, and hybrid models, which combine strategic centralization with territorial operational autonomy, are associated with more stable performance in the medium term. These findings validate the dynamic model proposed in the present research and confirm the applicability of the principle of adequacy of the coordination style to the crisis phase.

4.3. SWOT analysis of coordination mechanisms

A SWOT analysis of the mechanisms for coordinating the response to public health emergencies in the Republic of Moldova was carried out.

The analysis highlighted, as strengths, the existence of a hierarchical coordination structure, with a central role of the National Extraordinary Public Health Commission, perceived as an element of decision-making stability at national level, as well as the functionality of the relations between the national and territorial levels, supported by significant statistical correlations between the clarity of roles and the efficiency of coordination. The capacity for institutional adaptation and the progressive improvement of perceptions of coordination in the period 2022–2024 indicate an organizational learning process, strengthened through integration into international support mechanisms and the development of digital monitoring and reporting platforms.

At the same time, the analysis identified important vulnerabilities, related in particular to the inadequacy of the legislative-regulatory framework, the absence of standardized operational

procedures and the incomplete delimitation of competences in emergency situations. The data revealed discrepancies between the national and territorial levels in terms of the perception of efficiency and control of the implementation of measures, as well as limitations in local administrative resources and capacities. Statistical correlations confirmed the association between regulatory deficiencies and control and implementation issues.

The opportunities identified are aimed at strengthening and institutionalizing territorial coordination structures, developing an integrated information system at national level and implementing the set of performance indicators developed within the research, which can serve as a tool for monitoring and evaluating the functionality of response mechanisms. Advanced digitalization and European integration are also strategic directions for modernising public health coordination.

Among the threats are political interference, the risk of politicization of decisions during electoral periods, structural vulnerabilities of the system and dependence on external resources, as well as the risk of repeated institutional improvisation in the absence of sustainable normative and organizational consolidation.

4.4. Analysis of performance standards and indicators of achievement

Assessing the effectiveness of coordination requires a clear framework of indicators

Most respondents pointed out the lack of clear criteria for measuring the performance of territorial structures during the crisis, which generated difficulties in justifying decisions or in objectively assessing their functionality.

"We did not have a clear evaluation framework. It was rather a work of reaction and improvisation, without stable performance indicators" (CTESP member)

This observation is also supported by the discussions in focus groups, where the participants stressed the need for common indicators at national level, in order to ensure coherence and comparability between districts.

4.4.1. Set of indicators for assessing the effectiveness of coordination mechanisms

Based on the results obtained and the conceptual models developed, a set of indicators was developed to assess the effectiveness of inter-institutional coordination mechanisms in public health emergencies. The proposed framework integrates quantitative and qualitative indicators, organised on thematic dimensions relevant to the functionality of the coordination.

The coordination and leadership dimension aims at the speed of activation of the coordination structures, the level of intersectoral participation and the degree of clarity and transparency of the decision-making process. Operational functionality is assessed through indicators that reflect the timeliness of decision-making, the pace of operational activities and compliance with the deadlines for implementing measures. The ability to adapt is assessed by the frequency of updating response plans, the existence of protocols for alternative scenarios and the speed of reaction to significant changes in the epidemiological context. The communication and transparency dimension includes indicators on the frequency and consistency of public information, as well as the accessibility of official information.

The proposed framework can be adapted and validated through consultations with experts in public health and emergency management, as well as by retrospective application to data generated during the COVID-19 pandemic, constituting a basis for institutionalizing a permanent coordination evaluation mechanism in the Republic of Moldova.

Table 3. Set of proposed indicators for the evaluation of the mechanisms for coordinating the response to public health emergencies in the Republic of Moldova (based on research results)

Domain	Indicator	Type	Description	Data source
Coordination and leadership	Activation time of coordination structures	Quantitative	Number of hours/days between the notification of the crisis and the activation of the CNESP/CTESP	Official reports, activation orders
	Degree of cross-sectoral participation	Quantitative	Number of institutions represented in coordination meetings	Minutes, attendance lists
	Clarity of decision-making	Qualitative	Existence and publication of formal decisions, traceability of decisions	Official documents, government websites
Operational functionality	Time to submit decisions to the local level	Quantitative	Interval between central decision and territorial enforcement	Internal correspondence, local reports
	Frequency of operative sessions	Quantitative	Number of meetings per month during the crisis period	CTESP minutes
	Degree of implementation of measures	Quantitative /Qualitative	Percentage of measures applied within the deadline; Obstacles identified	Monitoring reports, interviews
Adaptability	Update response plans	Quantitative	Number of revisions of crisis action plans	CTESP/CNE SP plans, informative notes
	Reaction time to major changes	Quantitative	The interval between the occurrence of a new event and the institutional reaction	Official chronologies, media
Communication and transparency	Number of official public communications	Quantitative	Briefings, press releases, press conferences	Website of the Ministry of Health, CNESP
	Accessibility of public information	Qualitative	Existence and clarity of communication channels for the public	Online Content Rating
	Coherence of institutional messages	Qualitative	The extent to which messages from different authorities are aligned	Media Analytics

Vertical and territorial coordination	The degree of autonomy of CTESP in locally adapted decisions	Qualitative	Ability to adjust measures to local specificities	Interviews, focus groups
	Response from central authorities to CTESP requests	Quantitative /Qualitative	Reaction time and type of support provided	CTESP reports, interviews

These indicators have been developed based on the gaps and strengths identified in the research carried out and can be used for the periodic evaluation of coordination systems in public health emergencies, as well as for international comparisons.

4.5. Evaluation of coordination in public health

The SWOT analysis highlighted that the coordination mechanisms in the Republic of Moldova benefit from the existence of functional institutional structures and a demonstrated capacity to adapt, but their effectiveness is limited by regulatory deficiencies and territorial disparities in implementation. The insufficiency of the legislative-normative framework and the lack of standardized operational procedures are major vulnerabilities that affect the coherence of the decision-making process at local level. International integration, digitalization and the experience gained during the pandemic period represent strategic opportunities for strengthening and institutionalizing coordination mechanisms. At the same time, political interference, fragmentation of responsibilities and dependence on external resources can pose threats to the sustainability of the system. The development of the set of performance indicators and the framework for the evaluation of coordination mechanisms provides an applicative tool for monitoring and optimizing the functionality of territorial response structures, stressing the need for a systemic, integrated and institutional capacity-building approach at all administrative levels.

CONCLUSIONS

1. The coordination model in the Republic of Moldova functioned during the COVID-19 pandemic but was affected by persistent structural limitations.

The research results indicate that the hybrid coordination system enabled an organized and coherent national response. However, its performance was constrained by persistent deficiencies in the legislative and regulatory framework and by notable discrepancies between the central and territorial levels. The critical perception regarding the insufficiency of the legislative framework, expressed by 59.3% of respondents in 2024, as well as the differences in perceived efficiency between CNESP (3.4) and CTESP (2.7), reflect systemic structural vulnerabilities that limited the effectiveness of coordination mechanisms.

2. Clarity of institutional roles and hierarchical relationships represents a major determinant of coordination efficiency.

Statistical analysis revealed a strong positive correlation ($r = 0.68$) between the clarity of institutional roles and the efficiency of coordination mechanisms. These findings confirm the importance of clearly defined responsibilities between central and territorial structures. The absence of clearly defined competencies generated difficulties in the coherent implementation of decisions, particularly at the territorial level.

3. Institutional communication constituted a critical factor influencing the effective implementation of decisions.

Although most respondents perceived public health measures as clear (86.9% in 2024), both quantitative and qualitative data indicate the presence of operational communication deficiencies between central and territorial levels. These shortcomings affected the uniformity and timeliness of decision implementation, highlighting the need for integrated and standardized mechanisms of interinstitutional communication.

4. Adaptation of measures to the local context significantly contributed to increasing territorial efficiency.

The results show that territories where central decisions were adapted to local conditions recorded efficiency levels approximately 32% higher compared to those where implementation followed a strictly uniform approach. This finding confirms the importance of maintaining a functional balance between centralized strategic direction and local operational autonomy. The coordination system demonstrated institutional learning capacity and gradual adaptation over time.

5. The positive evolution of perceptions regarding the responsibility of CTESP members—from 47.8% in 2022 to 52.1% in 2024—indicates a gradual consolidation of institutional accountability and maturity. This dynamic suggests that the experience accumulated during the pandemic contributed to improving coordination practices and strengthening institutional performance.

6. Intersectoral collaboration represents a key determinant of coordination efficiency.

The analysis indicates that the level of intersectoral cooperation explains approximately 36% of the variation in coordination efficiency at the territorial level. The coherent integration of actors from public health, local administration, public order, and other sectors proved essential for the effective functioning of response mechanisms in public health emergencies.

7. The research enabled the development of a set of indicators for evaluating coordination mechanisms in public health emergencies.

Based on the integrated analysis of quantitative and qualitative data, a set of performance indicators was developed covering dimensions such as institutional coordination, operational functionality, adaptive capacity, public communication, and vertical coordination between central and

territorial levels. These indicators may be used for periodic monitoring and evaluation of the performance of coordination structures (CNESP and CTESP), contributing to improved transparency, identification of institutional gaps, and strengthening the capacity of the public health system to respond effectively to future emergencies.

RECOMMENDATIONS

At national level:

1. Updating and harmonizing the legislative framework to clearly define competences and responsibilities in coordinating the response to public health emergencies.
2. Institutionalization and formalization of the coordination processes between CNESP and CTESP by establishing a calendar of periodic meetings and standardized communication and reporting procedures.
3. To establish a robust system for monitoring and evaluating the implementation of CNESP decisions at territorial level, with feedback mechanisms and adjustment of measures.
4. Developing standardized operational procedures for different public health emergency scenarios.

At the territorial level:

1. Increasing the autonomy and responsibility of local authorities in adapting and implementing response measures.
2. To elaborate local response plans adapted to the specifics and resources of each district/municipality, based on the assessment of local risks.
3. Development of leadership and coordination skills of CTESP presidents and secretaries through training programs.
4. Development and implementation of performance indicators for the evaluation of coordination mechanisms.
5. Development of feedback mechanisms and monitoring of coordination at all levels.

Ministry of Health:

1. Developing standardized communication and coordination procedures with CTESP.
2. Development of technical and methodological support mechanisms for local authorities in the coordination process.
3. Establishment of a system for monitoring the coordinated implementation of decisions at territorial level.

National Agency for Public Health:

1. Development of analytical capacities to substantiate coordination decisions.
2. Facilitating coordination between national and territorial level through training and technical assistance.

BIBLIOGRAPHY

1. Whitsel L.P., Ajenikoko, F., Chase, P.J. Public policy for healthy living: How COVID-19 has changed the landscape. *Prog. Cardiovasc. Dis.* January 2023; 76:49–56.
2. World Health Organization: Novel Coronavirus (2019-nCoV) Situation Report – 10 [Internet]. Jan 2020 Available at: https://www.who.int/docs/default-source/coronavirus/situation-reports/20200130-sitrep-10-ncov.pdf?utm_source=chatgpt.com.
3. Cucinotta D., Vanelli M.: WHO Declares COVID-19 a Pandemic. *Acta Bio Medica Atenei Parmensis.* [Internet]. March 2020 91, 157–160 (2020). Available at: <https://doi.org/10.23750/abm.v91i1.9397>
4. European Commission: European Health Union: stronger and better prepared for the future. [Internet]. European Commission. 2024. Available at: https://ec.europa.eu/commission/presscorner/detail/en/ip_24_2523
5. Gooding K., Bertone M.P., Loffreda G. How can we strengthen partnership and coordination for health system emergency preparedness and response? Findings from a synthesis of experience across countries facing shocks. *BMC Health Serv. Res.* Nov. 29, 2022; 22(1):1441.

LIST OF PUBLICATIONS AND PARTICIPATION IN SCIENTIFIC FORUMS

of Mrs. Demiscan Daniela, carried out in the doctoral thesis in medical sciences with the theme "Coordination of response measures to COVID-19 at territorial level",
Doctoral Program 331.03 Social Medicine and Management,
Ph.D. supervisor Oleg Lozan, Ph.D. med, prof.univ.,

SCIENTIFIC PAPERS

- **Articles in scientific journals abroad:**

- ✓ **articles in international journals ISI, SCOPUS and other international databases recognized by ANACEC**

1. Lozan O., Mița V., **Demışcan D.**, Buzeti T., Beznec P., Sava V., Curteanu A., Rîmiș C., Canavan R., Prytherch H. Assessing capacities to strengthen intersectoral collaboration in Territorial Public Health Councils in the Republic of Moldova. In: *PLoS ONE.* 2024; 19(5): E0303821. <https://doi.org/10.1371/journal.pone.0303821>.
2. Sane J., Schmidt T., Isla N., Ibrahim R., Boshevska G., Mayigane LN., Perriat D., Stauke J., Esquevin S., Fehr A., Brajovic M., Bajić B., Galic I., Humolli I., Bunjaku DG., Gheorghita S., Kuli A., Manevska S., Stavridis K., **Demışcan D.**, Capmari D., Mengistu AA. Key lessons learnt from COVID-19 intra-action reviews in the Republic of Moldova, Montenegro, Kosovo and North Macedonia 2020-2021: a qualitative study. In: *BMJ Open.* 2023; 3(3): E066279. <https://doi.org/10.1136/bmjopen-2022-066279>.
3. Lieberoth A., Nielsen S. M., Reynen-de-Kat C. M., Rotaru C., Niazyan L., Parandzem P., Craig B. J., Karstadt O. M., **Demışcan D.**, Paraschiv A., Gutu V. A large-scale cross-country trial of WHO's Immune Patrol: Towards a game-based digital curriculum for vaccine readiness and global health education. In: *Frontiers in Education. Digital Learning Innovations.* 2025, <https://doi.org/10.3389/feduc.2025.1472018>.

- ✓ **Articles in magazines abroad that are reviewed**

4. **Demışcan D.** Assessing the effectiveness of The Extraordinary Territorial Public Health Commissions's coordination mechanisms in the COVID-19 response in Republic of Moldova:

coordination and capacity gaps. In: One Health & Risk Management. 2025, 6(2): <https://doi.org/10.38045/ohrm.2025.2.05>.

5. Cobb A., **Demişcan D.** Lynch J. F. The Little Country that Could: Creative Solutions to Early COVID-19 Vaccination in the Republic of Moldova. In: The Columbia University Journal of Global Health. 2025. 15(2):1-6. <https://doi.org/10.52214/cujgh.v15i2.13937>.

- **Articles in accredited national scientific journals:**

- ✓ **articles in category B journals**

6. **Demişcan D.** Coordination of COVID-19 response measures at territorial level. Public Health, Economics and Management in Medicine. 2024; 101(4): 6–10. [https://doi.org/10.52556/2587-3873.2024.4\(101\).01](https://doi.org/10.52556/2587-3873.2024.4(101).01).
7. **Demişcan D.,** Lozan O. The use of artificial intelligence in coordinating COVID-19 prevention measures at the territorial level. In: Mold J Health Sci. 2024; 11(4):44-48. <https://doi.org/10.52645/MJHS.2024.4.07>.

- **Articles in the proceedings of scientific conferences**

- **Abstracts/abstracts/theses in the papers of national and international scientific conferences**

8. Cobb A. N., Lynch J. F., Popel V., Sanduleac L., **Demişcan D.** Understanding Social Determinants of Health: A Case Study on the Development of Health Data Infrastructure in the Republic of Moldova. In: PSOM Research Symposium Program Book. Perelman School of Medicine, University of Pennsylvania. Philadelphia, USA; 2025, p. 19.
9. **Demişcan D.** Coordination of public health measures during COVID-19. In: Public Health, Economics and Management in Medicine. 2024; 4 (101 S), supl. 1:83-84. ISSN 1729-8687.
10. **Demişcan D.** Coordination of anti-COVID-19 vaccination campaigns in the Republic of Moldova: lessons learned and perspectives for strengthening the resilience of the public health system. In: Materials of the National Conference "Achievements, Challenges and Perspectives in Vaccinology"; 2025. p. 83. ISBN 978-9975-58-344-2.
11. **Demişcan D.** Coordination of COVID-19 response measures at territorial level. In: Moldovan Journal of Health Sciences. 2025; 12(3), Annex 2: Summary of the Anniversary Congress "80 Years of Innovation in Health and Medical Education"; October 20–22, 2025; Chisinau, Republic of Moldova. p. 662.

- ✓ **Innovator Certificates**

12. **Demişcan D.** Set of indicators for the evaluation of the mechanisms for coordinating the response to public health emergencies and monitoring the performance of the CTESP. Innovator Certificate no. 6351 of March 26, 2025. "Nicolae Testemitanu" State University of Medicine and Pharmacy of the Republic of Moldova.
13. **Demişcan D.** Method for assessing the coordination of the response to public health emergencies by applying an original tool - questionnaire validated in the context of the COVID-19 pandemic. Innovator Certificate no. 6350 of March 26, 2025. "Nicolae Testemitanu" State University of Medicine and Pharmacy of the Republic of Moldova.

- **ACTIVE PARTICIPATION IN SCIENTIFIC FORUMS**

- **Participation with communications at scientific forums:**

- ✓ **national teams with international participation**

14. **Demișcan D.** "Enhancing National and Regional Coordination for Health Security in Moldova. A Case Study of COVID-19 Response". In: Health Care Professional's Capacity Building for Early Detection and Response to Public Health Emergencies in Central and South-Eastern Europe; October 17-18, 2023; Chisinau, Republic of Moldova.
 15. **Demișcan D.** "Policy options for adapting models to community needs". Paper presented at: Fifth Congress of Family Physicians of the Republic of Moldova with international participation; May 17-18, 2024; Chisinau, Republic of Moldova.
 16. **Demișcan D.** "COVID-19 in the context of the safety of medical workers". Paper presented at: National Conference with International Participation "Prevention and Control of Healthcare-Associated Infections"; September 19-20, 2024; Chisinau, Republic of Moldova.
 17. **Demișcan D.** "Coordination of anti-COVID-19 vaccination campaigns in Moldova: lessons learned and perspectives for the resilience of the public health system". Paper presented at: National Conference with international participation "Achievements, challenges and perspectives in vaccinology"; May 15-16, 2025; Chisinau, Republic of Moldova.
 18. **Demișcan D.** "Coordination of response measures to the COVID-19 pandemic at territorial level". Paper presented at: Anniversary Congress with international participation "80 years of innovation in health and medical education"; October 20-22, 2025; Chisinau, Republic of Moldova.
- **Participation with posters in scientific forums:**
 - ✓ **international**
19. **Demișcan D.** "Community-Centered Public Health Strategies for the COVID-19 Pandemic in the Republic of Moldova". In: The 17th Annual CHOP Pediatric Global Health Conference, "Health for Every Child: Strengths-Based Approaches Locally and Globally"; October 10–11, 2025; Philadelphia, USA.
 20. **Demișcan D.** "Contributing Factors and Public Health Responses to Measles Epidemics in the Republic of Moldova". In: The 17th Annual CHOP Pediatric Global Health Conference, "Health for Every Child: Strengths-Based Approaches Locally and Globally"; October 10–11, 2025; Philadelphia, USA.
 21. **Demișcan D.** "Understanding Social Determinants of Health: A Case Study on Development of Health Data Infrastructure in the Republic of Moldova". In: Perelman School of Medicine Student Research Symposium; November 21, 2025; Philadelphia, USA.

ADNOTAREA

Demișcan Daniela, teză de doctor în științe medicale: „Coordonarea măsurilor de răspuns la pandemia COVID-19 la nivel teritorial”, teză de doctor în științe medicale, Chișinău, 2026

Actualitatea cercetării: Pandemia COVID-19 a afectat profund sănătatea, economia și societatea. În Republica Moldova, confirmarea primului caz (7 martie 2020) a evidențiat importanța structurilor instituționale și a cooperării intersectoriale în gestionarea crizelor sanitare. Evaluarea CTESP este esențială pentru gestionarea viitoarelor urgențe de sănătate publică.

Scopul lucrării: Analiza funcționalității CTESP în răspunsul la COVID-19 și elaborarea recomandărilor pentru îmbunătățirea mecanismelor de coordonare.

Obiectivele cercetării: 1. Analizarea practicilor și recomandărilor internaționale pentru răspunsul la COVID-19. 2. Studiarea modelelor teoretice de coordonare a urgențelor sanitare (centralizat, descentralizat, hibrid). 3. Evaluarea mecanismelor naționale de coordonare din Republica Moldova. 4. Evaluarea funcționalității CTESP în răspunsul la COVID-19. 5. Elaborarea recomandărilor pentru optimizarea mecanismelor de coordonare în urgențele de sănătate publică.

Noutatea și originalitatea științifică: Una dintre primele analize și investigații ale interacțiunilor dintre autoritățile centrale și locale în gestionarea COVID-19 cu accent pe rolul CTESP.

Rezultatul/rezultatele majore noi obținute: Modelul hibrid CNESP–CTESP a funcționat cu limitări legislative; eficiența a fost mai mare central (3,4) decât teritorial (2,7). Claritatea rolurilor și cooperarea intersectorială au crescut eficiența locală, iar percepția responsabilității CTESP a urcat între 2022–2024 (47,8% → 52,1%).

Semnificația teoretică: Elaborarea unui cadru conceptual privind coordonarea intersectorială în crize sanitare, cu perspectivă diacronică asupra transformărilor mecanismelor de coordonare.

Valoarea aplicativă: Transpune soluții practice în optimizarea coordonării și îmbunătățirea proceselor decizionale în CTESP.

Implementarea rezultatelor științifice: Rezultatele pot fi implementate prin recomandări pentru îmbunătățirea și ajustarea coordonării la nivel teritorial.

Structura tezei: Studiul este structurat în 110 pagini, 4 capitole, 152 surse bibliografice, CV-ul, 5 tabele și 16 figuri. Rezultatele obținute sunt publicate în 11 lucrări științifice.

Cuvinte cheie: COVID-19, urgență de sănătate publică, coordonare, mecanisme de coordonare, răspuns la pandemie, CTESP, CNESP, autorități publice locale, managementul crizelor.

ANNOTATION

Demiscan Daniela, PhD thesis in medical sciences: "Coordination of response measures to the COVID-19 pandemic at the territorial level", PhD thesis in medical sciences, Chisinau, 2026

Relevance of the Research: The COVID-19 pandemic affected health, the economy, and society. In the Republic of Moldova, the first case (March 7, 2020) tested the healthcare system, highlighting the importance of strong institutional structures and intersectoral cooperation. Evaluating CTESP is crucial for future public health emergencies.

Purpose: To analyze the functionality of CTESP in the COVID-19 response and to develop recommendations for improving coordination mechanisms.

Objectives: 1. Analyze international practices and recommendations for COVID-19 response. 2. Study theoretical models of health emergency coordination (centralized, decentralized, hybrid). 3. Evaluate national coordination mechanisms in the Republic of Moldova. 4. Assess the functionality of CTESP in the COVID-19 response. 5. Develop recommendations for optimizing coordination mechanisms in public health emergencies.

Scientific novelty and originality: One of the first analyses of the interactions between central and local authorities in managing COVID-19, with a focus on the role of CTESP.

Main Results: The hybrid CNESP–CTESP model functioned with legislative limitations; efficiency was higher at the central level (3.4) than territorial (2.7). Role clarity and intersectoral cooperation increased local efficiency, and the perception of CTESP responsibility rose between 2022–2024 (47.8% → 52.1%).

Theoretical significance: Development of a conceptual framework for intersectoral coordination in health crises, with a diachronic perspective on the transformation of coordination mechanisms.

Practical Value: Provides solutions to optimize coordination and improve CTESP decision-making.

Implementation of scientific results: Recommendations can enhance and adjust territorial coordination.

Thesis structure: The study is structured in 110 pages, including 5 chapters, 152 bibliographic sources, CV, 5 tables, and 16 figures. Results are published in 11 scientific papers.

Keywords: COVID-19, coordination, public health emergency, pandemic response, CTESP, CNESP, local public authorities, coordination mechanisms, crisis management, recommendations.

DANIELA DEMISCAN

COORDINATION OF RESPONSE MEASURES TO THE COVID-19 PANDEMIC AT TERRITORIAL LEVEL

331.03 – SOCIAL MEDICINE AND MANAGEMENT

Summary of the doctoral thesis in medical sciences

Approved for printing	Paper Size: A5
Offset paper. Digital Printing	Mintage:50 ex
Printing Sheets:2.4	Order no.

PRINT-CARO Typeface
m.Chisinau, str. Column, 170
printcaro@gmail.com
tel. 069124696