Original Article

Enhancing Service Improvement and performance at the National Institute of Public Health of Kosova

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ABSTRACT

Background

Public health experts deal with the assessment of the health needs of the population and provide professional expertise to decision-makers regarding the prioritization of health problems, the distribution of resources, and the design of health policies.

Aim

The aim of this research is to measure and increase the performance of the National Institute of Public Health (NIPH) of as well as design strategic plann based on SWOT analysis.

Methodology

The research is cross-sectional analysis and prospective planning. The triangulation method regarding the self-assessment of work achievements was carried out. The micro and meso levels of analysis were used for evaluation. SWOT analysis was used at the departmental level as well as the nominal group technique with the board of National Institute of Public Health (NIPH).

Results

SWOT analysis enabled the development of strategic plans to achieve SMART goals. The activities were categorized into four groups: human resources (HR), continuous professional development (CPD), organizational issues (OI), and material resources (MR). Three OI activities were prioritized at the top level because they were high impact–low effort. The MR activity 'Provision of means of transport' was labeled a fourth-level priority, being low impact–high effort, while all other activities were labeled second-level priorities, being high impact–high effort. ***Conclusion:*** Continuous investment in public health is necessary for a functional health system because it is a key factor influencing disease prevention and life extension.

Keywords

SWOT analysis; performance;quality, strategic plan

INTRODUCTION

Health is recognized as a fundamental human right[1], and it is the responsibility of governments to ensure that high-quality health care is available. Health care systems are among the biggest sectors in the global economy and play a vital role in enhancing community development by supporting good health in line with public expectations, while also ensuring fairness regarding the financial responsibilities of care.[2] Across the world, health systems encounter numerous obstacles, including the delivery of services and the generation, funding, and management of resources needed to enhance public health while also lowering individual health care expenses[3]. Issues of equity and financial protection for the population, particularly its most vulnerable members, are part of these challenges. Experts in public health evaluate the health requirements of communities and offer guidance to policymakers on prioritizing health issues, allocating resources, and crafting health guidelines. High-quality health care is seen as a crucial factor for the overall health of a population and is a key focus for political action[4]. There is a noticeable global trend towards improving

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the quality of health care through various policies and initiatives. Donabedian (1980) defined quality health care as "using medical science and technology in ways that maximize health benefits without raising risks"[5]. Meanwhile, Schuster (1998) characterized it as "offering patients suitable services in a skilled manner, along with effective communication, collaborative decision-making, and awareness of cultural differences"[6]. Another perspective on quality health care is "ensuring ongoing patient satisfaction by delivering effective and efficient services, adhering to the latest clinical standards and guidelines that meet patients' needs while also satisfying providers"[7]. In public health, quality improvement is viewed as a systematic, ongoing process aimed at enhancing health care standards. Today, quality allows health care providers across various fields to gain a competitive edge. In the past quarter-century, there has been a growing focus among governments worldwide on enhancing and managing the performance of health care systems through various procedures, measurement tools, and reporting mechanisms[6]. The area of measuring quality in health care has advanced significantly in recent years, capturing the attention of researchers, policymakers, and the broader population[8]. However, certain aspects make this measurement more complex than in other fields since it is often subjective, intangible, and diverse[9]. According to Mosadeghrad, "quality health care entails characteristics such as availability, accessibility, affordability, acceptability, appropriateness, competence, timeliness, privacy, confidentiality, responsiveness, accountability, accuracy, reliability, comprehensive services, continuity, equity, amenities, and facilities"[10]. Performance reflects how well the specific objectives of health systems at micro, meso, and macro levels are met, combining quality, efficiency, and effectiveness. Thus, the notion of performance is multidimensional, encompassing various facets like evidence-based practices, continuity and integration of health services, health promotion, and a focus on patient needs and expectations[11]. Health-care facilities are experiencing pressure from patients, payers, and society to deliver superior care. As a result, the provision of health services is growing increasingly complicated, resulting in difficulties related to ongoing quality enhancement and overall performance. Moreover, the rising demand for transparency about how health organizations perform relative to one another is pushing providers to concentrate on their outcomes and show value to their patients and clients.[12] The measurement of performance plays a crucial role in advancing health care by addressing quality, accountability, and efficiency across various sectors of health systems. Many health organizations have created key performance indicators to assess, track, and oversee their healthcare systems to guarantee that they operate effectively, equitably, and with quality.[13]

Despite this, numerous countries face both methodological challenges in evaluating health system performance and a shortage of trustworthy, high-quality data.[7]

Additionally, many health institutions worry about the accuracy and reliability of the information derived from their information systems. Essential components of performance evaluation, regardless of whether the analysis is at the micro, meso, or macro level, include performance indicators that must be precise. This precision is necessary for comparisons and interpretations to be significant, allowing providers to leverage the information to enhance their services. Therefore, performance assessment represents not just a technical issue but also an organizational and managerial obstacle. Since the 1980s, a new paradigm called total quality management has emerged, replacing the traditional approach. This model fosters a culture within organizations focused on quality enhancement involving all personnel, based on the understanding that quality services best meet the needs of the majority of clients, including patients and internal customers who rely on the services of others[14].

The National Institute of Public Health (NIPH) serves as the main professional and scientific entity in public health and acts as the educational foundation for the Faculty of Medicine at the University of Prishtina. The NIPH comprises five departments: epidemiology, human ecology, social medicine, microbiology, and health information systems, in addition to six regional public health centers. The institute addresses public health challenges, emergencies, pandemics, health system organization, health monitoring of the population, and socioeconomic factors affecting health, while also overseeing national health statistics. Monitoring and evaluation are essential parts of the NIPH's organizational culture and approach to quality improvement, laying the groundwork for reporting, accountability, and facilitating learning and service enhancement among staff. At the NIPH,

staff performance and departmental performance are reviewed annually. In late 2022, after nearly three years of grappling with the challenges posed by the COVID-19 pandemic, the NIPH conducted an internal evaluation of its performance and service quality aimed at forming a strategic management plan.

AIM

In this study, we aimed to measure the performance and service quality of the NIPH and design a 5-year strategic management plan.

METHODOLOGY

The study design was based on the triangulation method by conducting SWOT analysis and prospective planning. The triangulation method was used for self-assessment of work achievement within the NIPH, and micro and meso levels of analysis were used for evaluation. SWOT analysis was used at the departmental level, and the nominal group technique was used with the NIPH board.

To complete the SWOT framework, the departmental directors had previously reviewed the individual self-assessment reports of all of the workers using regular weekly reports that were combined into 3-, 6-, and 9-month reports, as well as summary reports for the previous year. In addition, the departments held a closing meeting wherein the individual self-evaluation reports, as well as the individual staff plans related to routine work within the department were discussed. For the micro-level work analysis, we used observation, questionnaires, and interviews. Although observation is considered the gold standard for the microanalysis of staff performance, it invokes the Hawthorne effect, which undermines the validity of the method when used as the sole method of measurement. Thus, questionnaires (standard form) and interviews were also used to evaluate staff performance. The analysis of the standard-format work reports was based on a systematic examination of task descriptions, responsibilities, expected outcomes, communication skills, and team flexibility when presented with unusual conditions. Staff interviews occur twice each year, in the middle and at the end of the year, at which time the individual reports are submitted and the tasks and possible obstacles are discussed. Because staff numbers are not excessive, departmental meetings were held frequently, ranging from monthly to daily in some cases.

For the meso-analysis, the evaluations of departmental performance during 2022 were reviewed. The data were combined within a framework and discussed with the NIPH board using the nominal group technique in an effort to prioritize activities based on impact–effort analysis and obtain approval for a needs-based plan and department-level prioritization.

The 5-year plan at the departmental level was based on staff input and involved a proactive approach based on SWOT analysis. This is expected to align with the Ministry of Health's (MoH) national strategic plan for 2023–2032.

Ethical Clearence: Passive informed consent was obtained, allowing participants freedom to opt out whenever they chose not to participate.

RESULTS

SWOT analysis

Strengths

Several strengths were identified during the assessment process. The National Institute of Public Health (NIPH) serves as a teaching base for the Faculty of Medicine at the University of Prishtina, and employs numerous public health professionals with a good understanding of the health system and strategies, relevant competencies, the ability to plan, organize and coordinate activities, explain work tasks and assigned objectives, and make fair, reasonable, and timely decisions. Characteristics that were identified as advantageous for the operation of the National Institute of Public Health (NIPH) included a proactive attitude towards various issues, the full utilization of personal and professional skills in performing work tasks, dedication and readiness to respond rapidly in both ordinary and extraordinary situations, initiative in undertaking work tasks that increased efficiency and effectiveness, problem-solving using new ideas, alternative approaches, and creativity, professionalism, experience, good time management, and the ability to communicate effectively with managers, subordinates, and other parties. Additional strengths that were identified included a friendly organizational climate, teamwork, continuous professional development, and support from the MoH, other government institutions, and international organizations.

Weaknesses

The main weaknesses that were identified were as

follows: the small number of specialized professional, technical, and administrative staff, a lack of staff in the cell culture and serology laboratories, and in warehouse management, and a lack of bio-engineers for equipment maintenance, as well as weak administrative capacity in various departments. Aging and retirement of staff, training of new staff that can take up to 2 years before they are able to work independently, limited opportunities for continuous professional development (CPD) for foreign-based staff, and excessive workloads were additional weaknesses identified by most departments.

In addition, the following areas for improvement were identified: a digital surveillance system for communicable diseases (CDs), real-time reporting of CDs by health professionals, full functionalization of the vaccination module within the framework of the health information system, standardization of analyses and reports, modernization based on international frameworks, strengthening of analytical capacities in the fields of air pollution and public nutrition, and increased capacity for quality management, with particular emphasis on microbiological laboratories, biomonitoring, virology, and parasitology. Other areas that required attention were the lack of a special budget for the health education unit, the unpredictable nature of requests by various institutions for the services of the NIPH, the non-prioritization of the prevention of food-related diseases that can have consequences 10 or 20 years in the future, staff training in more specialized areas, working conditions, lack of transport, lack of material stimulation, and lack of sufficient funding.

Opportunities

Support from donors and from the MoH (beyond the budget allocated to the NIPH has been essential during recent years for the purchase of equipment and the training of personnel. In addition to the heavy workload that it imposed, the COVID-19 pandemic has provided a great opportunity to update NIPH equipment. Additional financial resources beyond the NIPH budget allocation are expected to contribute to the achievement of future goals, as well as enabling cooperation with international organizations and other international projects in the field of public health.

Unfortunately, the lack of financial resources that could be used for staff development purposes (e.g. specialized training and participation in conferences), as well as the purchase of laboratory materials (e.g. reagents and equipment) does not allow the NIPH to generate any economic benefits at present, but it is anticipated that the introduction of health insurance will enable the NIPH to introduce various additional services, in particular microbiological services, that will generate significant revenue.

Threats

The main threats that were identified included non-prioritization of public health by the government, changes in health policies, lack of health insurance, the lack of or delay in complete, real-time data from institutions both within and beyond the health sector, civil society, limitations of the Food Law - AUV, unfair competition, and competitive marketing. The lack of sufficient personnel with adequate expertise, the lack of advancement of specific fields within various departments, and the decline of interest in public health specializations were also identified as additional threats, as were the lack of funds for research, projects, and CPD for staff, and lack of sufficient administrative support.

Strategic Planning

The 5-year strategic plan aims to define the overall work plan, in addition to routine tasks, and to prioritize activities based on SWOT analysis and impact–effort analysis.

SWOT analysis enables us to undertake the strategic planning necessary to achieve Specific Measurable Achievable Realistic and Timely goals in addition to the routine work of each department. The strategic plan we developed mainly reflected the WHO (mini-maxi) strategy type. After various decisions were made at the department level, a coherent overall strategy was developed with the aim of obtaining a competitive advantage in the public health services field, but its viability will be highly dependent on the health policies and national priorities included in the MoH's strategy for 2023–2032 [14].

The activities to be undertaken were categorized into four groups: human resources (HR), continuous professional development (CPD), organizational issues (OI), and material resources (MR).

After grouping their activities, each department had to prioritize their activities based on impact–effort analysis. Three activities in the OI group that were high impact–low effort were prioritized for achievement in the short term. The OI group activity 'Assessment of

hygienic and sanitary conditions in health institutions' was labeled a third-level priority, being low impact–low effort, as was the CPD group activity 'Realization of study visits,' while the MR group activity 'Provision of means of transport' was labeled a fourth-level priority, being low impact–high effort. The other 13 activities were all labeled second-level priorities, being high impact–high effort (see Table 1).

Human resources: It is planned to increase academic, professional, technical, and administrative staff, increase the capacity for sequencing of pathogens that are important for public health and for cell culture, and increase the numbers of administrative and logistical staff. Staff will be trained in sophisticated research methods through specific training programs and study visits. From the HR point of view, the presence in the microbiology department of a manager of administrative issues, a financial officer responsible for contract management, a warehouse manager responsible for warehouse management, an engineer responsible for equipment maintenance issues, and two or three additional laboratory workers would increase the functionality of the department's work. All of the department's activities were rated as level two, or high impact–high effort.

Continuous professional development: Priorities include staff education and training in sophisticated research methods and new analytical skills, increasing the capacity for sequencing of pathogens that are important for public health and for cell culture, and the undertaking of study visits. All of these activities were rated as level two, or high impact–high effort, except the undertaking of study visits, which was rated as level three, or low impact–low effort.

Organizational issues: Priorities include the implementation of the Law on Prevention and Control of Communicable Diseases and Special Health Issues, the implementation of a digitalized surveillance system for communicable diseases and the reporting of communicable diseases in real-time by health professionals, full functionalization of the vaccination module within the HIS and implementation of the 2022–2025 immunization action plan. Other aims include the implementation of the Guide and Menus for Nutrition Planning in Preschool Institutions in the Republic of [ ], assessment of hygiene and sanitation conditions in health institutions, the creation of a database on the quality and safety of water, sanitation, and hygiene in [ ]'s schools, the establishment of a quality management system in the microbiological laboratories, the drafting of work regulations in the microbiology department, more detailed micro-organization in terms of the division of individual tasks in an effort to increase individual and team performance, digitalization of procedures, the use of virtual teamwork, increased cooperation with international organizations, and improved working conditions, including cleanliness and comfort.

Material resources: Priorities include an increase in the capacities of the biomonitoring, virology, and parasitology laboratories, the creation of a separate budget line for health education, increased technological capacity using information and communication technology tools.

Quality dimensions

We evaluated the quality dimensions on a scale of 1 to 5, and the average overall rating was 4.1. The lowest average rating was for cleanliness (3.3), followed by rationalization of HR for the provision of health services (3.5), while the highest average rating was for implementation of technical services using a linguistic approach (4.8), indicating that the NIPH has an organizational climate of cultural competence and openness to clients from different cultural and linguistic groups (see Table 2).

DISCUSSION

The demands of new customer advancements in diagnostic medical technologies from leading practices in other nations and the pursuit of a competitive edge are compelling management to focus more on enhancing effectiveness, efficiency, and overall performance. In the NIPH, monitoring and evaluation are essential elements of the organizational culture, forming the foundation for accountability, reporting, and allowing staff to understand and enhance their service delivery. However, the ability to improve effectiveness is facing challenges due to tighter deadlines caused by rising demand, unforeseen public health threats, and growing responsibilities linked to adhering to public health regulations about equal opportunity and workplace safety.

Monitoring at the departmental level typically occurs daily or weekly, while evaluations happen biannually. Assessing quality is a complex and multi-faceted undertaking, and we currently lack an adequately precise measurement tool. SWOT analysis is a valuable

practical tool for assessing performance, as it allows organizations to evaluate their current state objectively and develop strategies for enhancing performance and achieving their goals while considering their internal and external circumstances, available resources, and necessary changes[15]

Since 2010, the Center for Laboratory Testing has achieved accreditation to the highest recognized international standard, ISO 17025, ensuring the quality of laboratory services. The requirement for staff to renew their licenses every five years reflects a deeply ingrained organizational culture committed to total quality management, with a strong emphasis on continuous professional development and a dedication to learning, despite various challenges.[16]

Human resources are vital to any healthcare organization, with a key focus on hiring qualified personnel based on market demands. The HR department operates efficiently, supported by a capable administration and a documentation system that tracks employee details, contracts, evaluations, and vacation records. However, personnel management largely falls on the department manager. HR planning is a flexible process designed to ensure the right number and mix of professionals with the necessary skills to meet departmental and organizational objectives. Additionally, factors such as staff aging, retirement, and turnover are carefully considered.

There are three HR planning strategies available: creating new roles, recruiting or promoting from within, and offering staff training through continuous professional development, summer school attendance, and specialized training. However, these strategies are directly influenced by the funding received from the Ministry of Health. While various methods like ProMES—Steps to Motivationally-Driven Performance Measurement and the Practice Environment Scale of the Nursing Work Index (PES-NWI), which assess the delivery of high-quality care, are used in many countries to enhance personnel effectiveness and overall performance. However, the NIPH relies on standard evaluation forms for annual performance assessments.

A significant challenge involves keeping employees motivated to pursue the objectives of their department or unit. Since employee motivation greatly influences their performance, staff members are often encouraged by discovering best practices within the department. Providing chances for continuous professional development (CPD) helps them achieve growth in their professional, academic, and technical skills. During the creation of the work plan for the NIPH, CPD was emphasized as essential. The assessment of CPD needs starts on an individual basis, rather than from a departmental perspective. This approach is crucial for empowering staff and allowing them to reach their full potential by enhancing the knowledge, attitudes, and competencies necessary for their tasks, thus supporting the goals of the department or organization. Tasks related to organizational improvement (OI), such as developing work regulations for the microbiology department, more organized micro-level structuring through specific task division, and the digitalization of processes, were prioritized due to their high impact with low effort, making them achievable in a short timeframe.

On the other hand, activities concerning medical regulation (MR) (Table 2) were primarily marked as lower priorities. These have a high impact but demand considerable effort, and their success relies on funding from the Ministry of Health. Considering the aspects of quality, every resident has access to health services provided by the NIPH, which encompass a full spectrum of services from identification to health education, health promotion related to critical socio-medical factors, prevention of risk factors, and management of various contagious and chronic diseases, along with advocacy and development of health policies. Key elements in quality enhancement include accountability, transparency, and safety. Safety within healthcare is a significant issue on its own and is closely tied to the notions of quality and effectiveness.

The safety aspect focuses on avoiding injuries caused by healthcare processes for both patients and workers. At NIPH, safety is viewed positively when compared to other quality dimensions (see Table 2). The influences of globalization and the pursuit of competitive advantages are propelling efforts toward better quality, productivity, effectiveness, performance, and customer confidence. However, slow economic growth, particularly in low- and medium-development countries, often shapes health policies and other management decisions in organizations.

CONCLUSION

In an effort to achieve better performance and, ultimately, the organization's goals, our SWOT analysis indicated that in addition to a good organizational structure and strong leadership, the main elements that need to be provided include political support, investment in HR and CPD, MR and technological resources, digitalization to optimize the organization's capacities, staff motivation, a friendly environment, collaboration with national and international partner institutions, decentralization of the financial system to enable better measurement of public health interventions, and ongoing development of scientific research programs and projects.

Sustained investment in public health is necessary for a functional health system because it is a key factor affecting disease prevention, life extension, and prevention of premature death.

Limitation

Despite the findings, several limitations should be considered when interpreting the results of this study. First, while the SWOT analysis it is not without its limitations. Other reported limitations relate to inadequate definition of factors (eg factors may fit into more than one category) and the lack of prioritisation. The advantages of using SWOT analysis in this review were that it allowed the health care stakeholders to focus attention on key issues that affect implementation and to recognize. It relies on self-reporting, which can be influenced by response biases and subjective interpretations.

CONFLICTS OF INTEREST

Authors do not have any competing interests to declare.

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Authors' contribution: SWOT analyse was initiated by the quality coordinator and, first author, who is also responsible for data gathering. The study as triangulation method was conducted by all the authors as part of the working group. The corresponding author was responsible for writing, submitting and editing, and approving of final manuscript draft.

ANEX

Table 1. Prioritization of activities based on impact–effort analysis

Issues	Activities	Rank
Human Resources	Employing profiled academic, professional, technical and administrative staff with a young age	2
	The presence of the administrator in the Department of Microbiology for administrative matters	2
	Employment of financial officer for contract management, depotist for warehouse management	2
	The presence of the engineer in the Microbiology department for equipment maintenance issues	2
	Employment of 3 laboratory assistants in the Department of Microbiology	2
Continuous Professiona Development	The support of CPD , strengthening human capacities in new, analytical, specific professional skills	2
	Raising the capacities for sequencing of pathogens important for public health, for cell culture in NIPHK	2
	Specific training for sophisticated research methods	2
	Realisation of study visits	3
Organizatio nal is sues	Implementation of the Law on Prevention and Control of Communicable Diseases and Special Health Issues	2
	Real-time reporting of Communicable Diseases by health professionals	1
	Full functionalization of the vaccination module within the HIS	2
	Implementation of the action plan for imunization 2022-2025	2
	Implementation of the digitilized system for the surveillance of communicable diseases	2
	Implementation of Guideline and Menus for Nutrition Planning in Preschool Institutions at the national level	2
	Assessment of hygienic and sanitary conditions in health institutions,	3
	Compilation of the database for the quality and safety of water, sanitation and hygiene at the national level	2
	Improvement of building infrastructure for laboratory needs,/cleanliness, and comfort	2
	Establishing the quality management system in microbiological laboratories	2
	Drafting of work regulations for the Department of Microbiology	1
	More detailed micro-level organization, with the division of individual tasks/digitalization of the procedures	1
Materiale Resources	Increase of laboratory capacities, biomonitoring, virology and parasitology	2
	Provision of technical-technological capacities,	2
	Provision of work tools from Communication Information Technology	2
	Established a budget line for Health promotion activities	2
	Provision of means of transport	4

Legend

1	High Impact -Low effort
2	High impact-High effort
3	Low impact-Low effort
4	Low impact- High effort

Table 2. Evaluation of quality dimensions at the National Institute of Public Health of [ ]

Quality Dimensions	Evaluation	Grade from 1 to 5
Technical Performance	Realization of your services, technically:	3.8
Access to services	Geographical	4.2
	Economic	3.8
	Cultural	4.3
	Organizational	4.2
	Linguistic	4.8
Effectiveness of care	Average number of services per day	4.2
Interpersonal relationships	Team work	4.3
Efficiency - rationalization of resources for the provision of services	Human resources	3.5
	Material resources	3.7
Continuity of services	Communication with other health institutions	4.0
	Patient follow up	4.2
Safety - risks of injury, infection or other harmful side effects	Patient safety	4.7
	Personnel safety	4.3
Physical Infrastructure	Working conditions, comfort,	3.7
	Cleanliness	3.3
	Privacy	3.8
Choice of services by the patient	Informed patient choice	4.5
Average mark		4.1

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