

Analysis of Strategic Planning for Enhancing the Capacity of Health Human Resources at Community Health Centers (Puskesmas) in Minahasa Regency

Olviene I. Rattu^{1*}, Jeffry S. J. Lengkong¹, Joulanda A.M. Rawis¹, Harol R. Lumapow¹, Ruth Umbase¹

¹Doctoral Program in Educational Management, Graduate School, Universitas Negeri Manado,
Indonesia

*Corresponding author: olvianerattu@gmail.com

ARTICLE INFO

Article history:

Received: February 17, 2026; Received in revised form: March 23, 2026; Accepted: April 02, 2026;

Available online: April 04, 2026;

ABSTRACT

The development of health human resources (HHR) is a critical determinant in improving the quality and effectiveness of primary healthcare services, particularly in community health centers (Puskesmas). In the context of decentralization and regional autonomy, local governments are required to manage health workforce planning strategically to ensure adequate availability, equitable distribution, and appropriate competencies of healthcare personnel. However, many regions in Indonesia continue to face persistent challenges, including workforce shortages, uneven distribution across geographical areas, and limited capacity development programs. This study aims to analyze the strategic planning process for enhancing the capacity of health human resources at community health centers in Minahasa Regency. Specifically, the study examines four key stages of planning: preparation, situational analysis, problem formulation, and the development of activity plans (Rencana Usulan Kegiatan/RUK). A qualitative approach with a case study design was employed to explore the complexity of planning processes within real organizational settings. Data were collected through in-depth interviews, observations, and document analysis involving key stakeholders, including health office officials, Puskesmas managers, healthcare workers, and planning personnel. Data analysis was conducted using the interactive model of Miles and Huberman, which includes data reduction, data

display, and conclusion drawing. The findings reveal that although strategic planning processes have been formally implemented in accordance with national guidelines, their execution remains suboptimal. Key issues identified include insufficient availability of health personnel, lack of accurate and updated workforce data, weak integration between planning and budgeting, limited capacity of planning staff, and inconsistencies between Puskesmas-level planning and district-level policies. Furthermore, the study highlights that educational management plays a crucial role in strengthening health workforce planning through continuous professional development, competency-based training, and systematic evaluation. The integration of management functions, planning, organizing, actuating, and controlling (POAC), is essential to ensure sustainable human resource development in primary healthcare settings. This study concludes that strengthening strategic planning for health human resources requires a comprehensive approach that integrates workload-based planning methods, capacity building for planners, improved data systems, and stronger policy support. It recommends the adoption of competency-based planning frameworks, enhanced intersectoral collaboration, and the institutionalization of continuous education programs to improve the quality of health services at Puskesmas.

Keywords: capacity development, educational management, health human resources, primary healthcare, Puskesmas, strategic planning.

INTRODUCTION

The success of healthcare systems is fundamentally determined by the availability, distribution, and competence of health human resources (HHR). In many developing countries, including Indonesia, the challenge of improving healthcare quality is closely linked to the effectiveness of human resource planning and management. Health human resources are not merely operational components of healthcare systems but represent the core drivers of service delivery, innovation, and community health outcomes. As such, strategic planning for health workforce development becomes a crucial priority in achieving national health goals.

In Indonesia, the importance of health human resources is emphasized in the National Health System (Sistem Kesehatan Nasional/SKN), which identifies HHR as a key subsystem responsible for implementing health services across promotive, preventive, curative, and rehabilitative dimensions. The effectiveness of healthcare delivery, especially at the primary level, is highly dependent on the availability of competent and adequately distributed health workers. The World Health Organization has also highlighted that up to 80% of health system performance is influenced by the quality and capacity of human resources, underscoring the strategic importance of workforce planning in health development.

Community health centers (Puskesmas) serve as the frontline of healthcare services in Indonesia. As primary healthcare facilities, Puskesmas are responsible for delivering comprehensive services, with a strong emphasis on promotive and preventive care. These institutions play a pivotal role in improving community health status and reducing the burden on secondary and tertiary healthcare facilities.

However, the effectiveness of Puskesmas is highly dependent on the adequacy and competence of their human resources.

Despite their critical role, many Puskesmas in Indonesia continue to face significant challenges related to human resource capacity. Empirical evidence indicates persistent shortages of healthcare workers, particularly in rural and remote areas. For instance, a considerable proportion of Puskesmas experience shortages of general practitioners, dentists, nurses, and midwives, which directly affects service delivery quality. In addition to quantitative shortages, qualitative issues such as mismatches between competencies and job requirements, limited opportunities for professional development, and inadequate workforce planning systems further exacerbate the problem.

One of the key issues in health human resource management is the lack of effective strategic planning. Strategic planning in this context involves a systematic process of identifying workforce needs, analyzing existing capacities, formulating priorities, and developing actionable plans to address gaps. According to management theory, strategic planning is essential for aligning organizational goals with available resources and anticipating future challenges. In healthcare settings, this process must consider not only current service demands but also epidemiological trends, demographic changes, and policy directions.

In Indonesia, the government has established regulatory frameworks to guide health workforce planning, including guidelines for workload analysis (Analisis Beban Kerja/ABK) and structured planning processes at various administrative levels. These guidelines emphasize the importance of evidence-based planning, where workforce needs are determined based on actual service demands and workload calculations. However, the implementation of these guidelines at the regional level often faces practical constraints, such as limited data availability, insufficient technical capacity among planners, and weak coordination between stakeholders.

Minahasa Regency represents a relevant case for examining these challenges. As a region with diverse geographical and demographic characteristics, Minahasa faces complexities in ensuring equitable distribution and adequate capacity of health human resources. Although the number of healthcare facilities, including Puskesmas, has increased over time, disparities in workforce availability and service quality remain evident. Some Puskesmas are well-equipped and adequately staffed, while others struggle with limited personnel and resources.

Furthermore, preliminary observations indicate that the planning processes at the Puskesmas level are not always conducted in accordance with established guidelines. For example, certain programs are implemented without going through a proper planning process at the facility level, and budget allocations are often not aligned with identified needs. These inconsistencies suggest gaps between policy frameworks and actual practices, highlighting the need for a more in-depth analysis of planning processes.

From an educational management perspective, the development of health human resources is closely related to the principles of continuous learning and capacity building. Educational management emphasizes the systematic organization of training, professional development, and evaluation processes to enhance workforce competence. In the context of healthcare, this involves designing competency-based training programs, facilitating knowledge transfer, and ensuring that healthcare workers are equipped with the skills required to address evolving health challenges.

The integration of educational management principles into health workforce planning is particularly important in primary healthcare settings. Puskesmas not only provide medical services but also serve as centers for health education and community empowerment. Therefore, healthcare workers are expected to function as educators and change agents within their communities. This dual role requires not only clinical competence but also communication skills, cultural sensitivity, and the ability to engage communities effectively.

The theoretical foundation of this study is grounded in several key concepts, including strategic planning, human resource management, and the resource-based view (RBV). Strategic planning provides a framework for understanding how organizations set goals and allocate resources to achieve them. Human resource management focuses on the processes of recruitment, development, and retention of personnel. Meanwhile, the resource-based view emphasizes that organizational performance is determined by the effective utilization of internal resources, including human capital.

In addition, this study adopts the POAC (Planning, Organizing, Actuating, Controlling) framework as a lens for analyzing management processes. This framework is widely used in educational and organizational management to examine how activities are planned, implemented, and evaluated. By applying this framework to health workforce planning, the study seeks to identify strengths and weaknesses in current practices and propose strategies for improvement.

This research aims to fill gaps in existing literature by providing an in-depth analysis of strategic planning processes for health human resources at the primary healthcare level. While previous studies have explored workforce shortages and distribution issues, limited attention has been given to the planning processes that underpin these challenges. By focusing on the stages of preparation, situational analysis, problem formulation, and activity planning, this study offers a comprehensive understanding of how planning is conducted and how it can be improved.

The objectives of this study are threefold. First, to analyze the processes involved in strategic planning for health human resource development at Puskesmas in Minahasa Regency. Second, to identify the challenges and constraints that affect the effectiveness of these planning processes. Third, to formulate recommendations for improving strategic planning through the integration of educational management principles and competency-based approaches.

The significance of this study lies in its potential contributions to both theory and practice. Theoretically, it enriches the field of educational management by demonstrating its application in healthcare settings, particularly in workforce planning. Practically, it provides insights and recommendations for policymakers, health managers, and practitioners to improve the effectiveness of health human resource planning and ultimately enhance the quality of primary healthcare services.

In conclusion, the development of health human resources is a complex and multifaceted challenge that requires strategic and systematic planning. By examining the planning processes at the Puskesmas level, this study seeks to contribute to the improvement of health workforce management and support the achievement of better health outcomes for communities in Minahasa Regency and beyond.

LITERATUR REVIEW

Educational management refers to the systematic process of planning, organizing, implementing, and evaluating educational activities to achieve desired learning outcomes effectively and efficiently (Bush, 2018). In healthcare settings, educational management plays a crucial role in ensuring that health professionals continuously develop their competencies in response to changing health needs and technological advancements. The application of educational management in health human resource development involves designing training programs, allocating resources, facilitating learning processes, and evaluating outcomes.

This perspective is further strengthened by Nurhayati, J.A.M. Rawis, H.N. Tambingon, and Jeffry S.J. Lengkong (2021), who explain that educational management involves managing all educational components, including curriculum, human resources, infrastructure, and learning environments, in a planned and sustainable manner in order to achieve educational objectives comprehensively. Although originally developed within educational institutions, this concept is highly relevant in healthcare settings because workforce development similarly requires coordinated management of learning resources, institutional support systems, and human capacity-building processes.

The managerial dimensions of educational management are also reflected in its operational functions. Tambingon et al. (2024) explain that educational management is an effort to manage institutions through the core managerial functions of planning, organizing, implementation, and controlling in order to achieve objectives effectively and efficiently, including human resource management, curriculum development, facility management, and periodic evaluation. This conceptualization directly supports the use of the POAC framework in healthcare human resource development. Planning involves identifying competency needs; organizing concerns resource allocation and program design; implementation focuses on delivering educational interventions; and controlling ensures monitoring and continuous improvement.

From a human resource development perspective, improving workforce quality should not be viewed solely as a technical process. Lengkong (2024) argues that strategies for improving human resource quality should be implemented continuously through positive behavioral habituation, active participation in work processes, and strengthening responsibility and discipline. Human resource quality is therefore shaped not only by technical competence but also by attitudes, commitment, and individual awareness. This perspective aligns with healthcare workforce development because health workers are expected not only to possess clinical knowledge and technical skills but also to demonstrate professionalism, accountability, and adaptive behavior in service delivery.

The growing role of technology further expands the scope of educational management in healthcare. Umbase (2023) emphasizes that education in the digital era requires improving managerial knowledge and skills through the integration of technology, pedagogy, and content knowledge (TPACK). Education can no longer be understood merely as a process of knowledge transmission but should be managed systematically through planning, implementation, and reflective learning processes supported by technology. In healthcare contexts, this perspective suggests that workforce training should integrate technological competence with practical and contextual learning approaches,

particularly as healthcare services increasingly rely on digital systems and technology-assisted practices.

METHOD

Research Design

This study employed a qualitative research approach using a case study design to explore in depth the strategic planning process for enhancing the capacity of health human resources at community health centers (Puskesmas) in Minahasa Regency. The qualitative approach was selected because the research aimed to understand complex processes, meanings, and interactions among stakeholders involved in health workforce planning. This approach allows researchers to capture real-world conditions and contextual dynamics that cannot be fully explained through quantitative methods.

The case study design was chosen to provide a comprehensive and holistic understanding of planning practices within their natural setting. According to Merriam and Tisdell (2016), case study research is particularly appropriate for examining processes and systems within bounded contexts, such as organizations or institutions. In this study, the bounded system consists of the Health Office and selected Puskesmas in Minahasa Regency, where strategic planning for health human resources is implemented.

Research Setting and Participants

The research was conducted in Minahasa Regency, Indonesia, focusing on the District Health Office and several Puskesmas as primary healthcare providers. This setting was selected due to its relevance in representing typical challenges in health workforce planning, including workforce shortages, uneven distribution, and limitations in planning capacity.

Participants were selected using purposive sampling, based on their involvement and relevance to the planning process of health human resources. The informants included:

- Officials from the District Health Office responsible for workforce planning and policy implementation
- Heads of Puskesmas and program coordinators
- Health workers (doctors, nurses, midwives, and public health staff)
- Planning staff and administrative personnel involved in preparing workforce planning documents

The selection of participants aimed to capture diverse perspectives and ensure data richness. The inclusion criteria were based on participants' experience, roles, and knowledge related to health human resource planning processes.

Data Collection Techniques

Data were collected through three main techniques to ensure triangulation and enhance the credibility of the findings:

a. In-depth Interviews

Semi-structured interviews were conducted to explore participants' experiences, perceptions, and understanding of the planning process. Interview guides were developed based on the research objectives, focusing on four stages of planning: preparation, situational analysis, problem formulation, and activity planning (RUK). Interviews allowed participants to provide detailed explanations and reflect on challenges and best practices.

b. Observation

Non-participant observations were conducted to examine actual practices in planning activities, coordination meetings, and service delivery contexts. Observations focused on how planning processes were implemented, including team formation, data usage, and decision-making dynamics. Field notes were recorded systematically to capture contextual information.

c. Document Analysis

Relevant documents were analyzed to complement interview and observation data. These documents included planning reports, Rencana Usulan Kegiatan (RUK), workforce data, policy documents, and official guidelines related to health human resource planning. Document analysis provided objective evidence of planning processes and helped validate findings from other data sources.

Data Analysis

Data analysis was conducted using the interactive model developed by Miles, Huberman, and Saldaña (2014), which consists of three main components:

a. Data Reduction

Data from interviews, observations, and documents were transcribed, coded, and categorized. The coding process involved identifying key themes related to strategic planning stages, challenges, and supporting factors.

b. Data Display

The reduced data were organized into matrices, charts, and thematic narratives to facilitate interpretation. Data display enabled the researcher to identify patterns, relationships, and inconsistencies across different data sources.

c. Conclusion Drawing and Verification

Conclusions were drawn based on the analysis and continuously verified through comparison with raw data. This iterative process ensured that findings were grounded in empirical evidence and reflected participants' perspectives accurately.

Trustworthiness of Data

To ensure the rigor and credibility of the study, several strategies were employed:

- **Triangulation:** Data were collected from multiple sources (interviews, observations, and documents) and from different participant groups to enhance validity.
- **Member Checking:** Preliminary findings were discussed with selected participants to confirm the accuracy of interpretations.
- **Audit Trail:** Detailed documentation of data collection and analysis processes was maintained to ensure transparency and replicability.
- **Prolonged Engagement:** The researcher spent sufficient time in the field to gain a deep understanding of the research context and build trust with participants.

These strategies align with the criteria of credibility, dependability, confirmability, and transferability as proposed by Lincoln and Guba (1985).

Ethical Considerations

Ethical principles were strictly adhered to throughout the research process. Participants were informed about the purpose of the study, and their consent was obtained prior to data collection. Confidentiality and anonymity were maintained by using codes or pseudonyms instead of participants' real names. Participants were also given the right to withdraw from the study at any time without any consequences.

RESULTS AND DISCUSSION

This study reveals that the strategic planning process for enhancing the capacity of health human resources (HHR) at community health centers (Puskesmas) in Minahasa Regency has been formally implemented in accordance with national guidelines. However, its practical implementation remains suboptimal due to structural, technical, and managerial constraints. The findings are organized based on four main stages of planning: (1) preparation, (2) situational analysis, (3) problem formulation, and (4) preparation of the Activity Plan (Rencana Usulan Kegiatan/RUK).

Overall, the results indicate that although planning mechanisms exist, their effectiveness is hindered by limited data accuracy, insufficient human resource capacity, weak coordination, and misalignment between planning and budgeting processes.

Planning Process Based on Preparation Stage

The preparation stage is intended to ensure readiness before conducting planning activities, including the formation of planning teams, availability of data, and understanding of planning

guidelines. The findings show that most Puskesmas have formally established planning teams; however, their functionality varies significantly.

In several cases, planning teams were formed only as administrative requirements without clear roles and responsibilities. Data preparation was also found to be incomplete and not updated regularly, which affected the quality of subsequent planning stages. Furthermore, not all staff involved in planning had received adequate training on health workforce planning methods. See tabel 1.

Table 1. Findings at the Preparation Stage

No	Aspect	Empirical Findings	Implications
1	Planning team formation	Teams exist but are often formalities	Weak coordination and unclear responsibilities
2	Data readiness	Data incomplete and not updated	Inaccurate planning outcomes
3	Planning capacity	Limited training for staff	Low technical competence in planning
4	Guideline understanding	Partial understanding of planning procedures	Inconsistent implementation

Planning Process Based on Situational Analysis Stage

The situational analysis stage involves identifying health problems, analyzing service needs, and assessing the availability and distribution of health human resources. The findings indicate that situational analysis is conducted but not optimally.

Most Puskesmas rely on basic data and routine reports rather than comprehensive analysis. The use of workload-based methods, such as Analisis Beban Kerja (ABK), is still limited. As a result, the identification of workforce needs is often based on estimation rather than evidence-based calculations.

Additionally, disparities in workforce distribution across regions were identified as a major issue. Some Puskesmas have relatively adequate staffing, while others experience significant shortages, particularly in specific professions such as doctors and dentists. See table 2.

Table 2. Findings at the Situational Analysis Stage

No	Aspect	Empirical Findings	Implications
1	Data utilization	Limited use of comprehensive data	Weak evidence-based planning
2	Method application	ABK method not fully applied	Inaccurate workforce estimation
3	Workforce distribution	Uneven distribution across regions	Inequality in service delivery
4	Problem identification	Generalized and not specific	Ineffective prioritization

Planning Process Based on Problem Formulation Stage

The problem formulation stage focuses on identifying priority issues based on situational analysis and aligning them with organizational goals and standards. The findings show that problem formulation is often not based on systematic analysis.

In many cases, priority problems are determined through informal discussions rather than structured analytical methods. There is also a lack of alignment between identified problems and

national standards for health workforce requirements. This results in planning outputs that do not fully reflect actual needs.

Moreover, the influence of external factors, such as directives from the Health Office, sometimes overrides local planning processes. This creates inconsistencies between local needs and implemented programs. See table 3.

Table 3. Findings at the Problem Formulation Stage

No	Aspect	Empirical Findings	Implications
1	Priority setting	Based on informal discussions	Subjective decision-making
2	Alignment with standards	Not fully aligned with national standards	Mismatch between needs and plans
3	Analytical approach	Limited use of systematic methods	Weak planning quality
4	External influence	Top-down directives dominate	Reduced local autonomy

Planning Process Based on RUK (Activity Plan) Stage

The Rencana Usulan Kegiatan (RUK) is the final output of the planning process, which includes proposed activities, resource allocation, and budget estimation. The findings indicate that while RUK documents are produced, their quality and implementation are not optimal.

One of the main issues is the misalignment between planned activities and available budgets. In many cases, funding is not available at the beginning of the fiscal year, causing delays in program implementation. Additionally, some programs are introduced directly by the Health Office without prior planning at the Puskesmas level.

This situation results in discrepancies between planned and implemented activities, reducing the effectiveness of the planning process. See table 4.

Table 4. Findings at the RUK Stage

No	Aspect	Empirical Findings	Implications
1	RUK preparation	Documents prepared but not optimal	Limited planning effectiveness
2	Budget alignment	Budget not synchronized with plans	Delayed implementation
3	Program implementation	Some programs not based on planning	Inefficiency and inconsistency
4	Monitoring and evaluation	Limited follow-up on plans	Weak control and feedback

Cross-Cutting Findings

Across all stages, several key issues consistently emerged:

- Limited Human Resource Capacity
- Planning staff lack adequate technical skills in workforce planning, data analysis, and strategic thinking.

a. Weak Data Systems

Data on health human resources are often incomplete, outdated, and not integrated, limiting their usefulness in planning.

b. Poor Coordination

Coordination between Puskesmas and the Health Office is not fully effective, leading to inconsistencies in planning and implementation.

c. Policy and Budget Constraints

Limited budget support and policy misalignment hinder the implementation of planned activities.

d. Educational Management Gaps

There is a lack of structured and continuous training programs to improve planning competencies among health workers.

The results indicate that the strategic planning process for health human resources in Minahasa Regency is still predominantly procedural rather than strategic. While formal steps are followed, the lack of data-driven analysis, limited capacity, and weak integration between planning and implementation reduce the effectiveness of the process.

From an educational management perspective, these findings highlight the need for strengthening capacity development through structured training, competency-based approaches, and continuous evaluation systems. The integration of management functions (POAC) is essential to transform planning practices into more effective and sustainable processes.

Strategic Planning as a Procedural vs. Strategic Process

The findings of this study indicate that the strategic planning process for health human resources (HHR) at Puskesmas in Minahasa Regency is predominantly procedural rather than truly strategic. Although all formal stages of planning, preparation, situational analysis, problem formulation, and activity planning, are implemented, their execution lacks depth, analytical rigor, and long-term orientation.

This condition aligns with Bryson's (2018) argument that many public sector organizations engage in "symbolic planning," where planning processes are carried out merely to fulfill administrative requirements rather than to guide strategic decision-making. In this study, planning documents such as the Rencana Usulan Kegiatan (RUK) are produced regularly; however, their content does not always reflect actual needs or strategic priorities.

The limited use of data-driven approaches, such as workload analysis (ABK), further demonstrates that planning is not fully evidence-based. Instead, decisions are often based on assumptions or routine practices. This finding is consistent with Campbell et al. (2016), who highlight that weak data systems and limited analytical capacity are major barriers to effective health workforce planning in developing countries.

From a strategic management perspective, this situation suggests a gap between intended strategy and realized strategy. While formal planning frameworks exist, their implementation does not translate into effective actions due to constraints in capacity, resources, and organizational systems.

Human Resources as Strategic Assets: A Resource-Based View (RBV) Perspective

The findings of this study strongly support the Resource-Based View (RBV), which emphasizes that human resources are critical strategic assets that determine organizational performance. In the context of Puskesmas, health workers represent not only operational resources but also key drivers of service quality and community health outcomes.

However, the study reveals that these human resources are not yet managed as strategic assets. Issues such as workforce shortages, uneven distribution, and limited competency development indicate that the potential of human resources has not been fully optimized.

According to RBV theory, organizations must develop valuable, rare, inimitable, and non-substitutable (VRIN) resources to achieve sustained competitive advantage (Kraaijenbrink et al., 2016). In healthcare settings, this translates into developing highly competent, adaptable, and well-distributed health workers. The lack of continuous professional development and structured training programs observed in this study suggests that Puskesmas have not yet achieved this level of strategic resource management.

Furthermore, RBV highlights the importance of organizational capabilities, including planning, coordination, and leadership. The findings show that weaknesses in these capabilities, particularly in data management and planning skills, limit the effectiveness of strategic planning. Therefore, improving organizational capabilities is as important as increasing the number of health workers.

Educational Management and the Role of POAC Framework

The findings underscore the critical role of educational management in strengthening health workforce planning. Educational management provides a systematic approach to developing human resources through continuous learning, training, and evaluation.

Using the POAC framework (Planning, Organizing, Actuating, Controlling), this study identifies several gaps:

- **Planning:** Needs assessment is not fully based on accurate data and systematic analysis.
- **Organizing:** Planning teams exist but lack clear roles, coordination, and capacity.
- **Actuating:** Implementation of training and development programs is limited and not continuous.
- **Controlling:** Monitoring and evaluation mechanisms are weak, with limited feedback loops.

These findings are consistent with Bush (2018), who emphasizes that effective educational management requires the integration of all management functions to ensure sustainable improvement. The absence of a comprehensive educational management system results in fragmented and inconsistent capacity development efforts.

Moreover, the lack of structured training programs for planning staff highlights the need for competency-based education. As suggested by Frank et al. (2016), competency-based approaches focus on practical skills and real-world application, which are essential for effective workforce planning.

The Importance of Data-Driven and Evidence-Based Planning

One of the most significant findings of this study is the limited use of data in planning processes. Accurate and updated data are essential for identifying workforce needs, analyzing gaps, and making informed decisions. However, the study reveals that data systems are weak, fragmented, and not fully utilized.

This finding supports the argument by WHO (2020) that strong health information systems are a prerequisite for effective workforce planning. Without reliable data, planning becomes speculative and prone to errors. The limited application of workload-based methods (ABK) further indicates that planning is not fully aligned with service demands. This results in mismatches between workforce supply and actual needs, leading to inefficiencies and inequities in service delivery.

From a policy perspective, this highlights the need for strengthening data systems and building the capacity of planning staff to use data effectively. Training in data analysis and evidence-based decision-making should be integrated into capacity development programs.

Organizational and Policy Constraints

The study also reveals that organizational and policy constraints significantly affect the effectiveness of planning processes. These include limited budget availability, delays in fund allocation, and top-down policy directives that override local planning processes.

These findings are consistent with previous studies (Kemenkes RI, 2019; Dolea et al., 2017), which emphasize that decentralization can create challenges in aligning national policies with local implementation. In Minahasa Regency, the lack of synchronization between planning and budgeting processes results in delays and inconsistencies in program implementation.

Furthermore, the influence of top-down directives reduces the autonomy of Puskesmas in determining their priorities. This contradicts the principles of participatory planning, which emphasize the involvement of local stakeholders in decision-making processes (Green & Kreuter, 2020). From a governance perspective, this suggests the need for better coordination between different levels of government and stronger integration of planning and budgeting systems.

Capacity Development and Adult Learning Perspectives

The findings highlight the importance of capacity development in improving planning effectiveness. However, current capacity development efforts are limited, sporadic, and not systematically implemented.

From an adult learning perspective, effective training programs should be relevant, practical, and experience-based (Knowles et al., 2015). The lack of continuous and structured training programs in this study indicates that adult learning principles are not fully applied.

Experiential learning models, such as Kolb's learning cycle, emphasize the importance of reflection and continuous improvement. In the context of workforce planning, this means that planning staff should be given opportunities to practice, reflect, and improve their skills through ongoing training and mentoring.

Blended learning approaches could also be explored to support continuous learning, particularly in resource-constrained settings. These approaches provide flexibility and enable healthcare workers to learn without disrupting service delivery.

Implications for Theory and Practice

This study contributes to the literature by integrating strategic planning, educational management, and RBV perspectives in the context of health workforce development. It demonstrates that effective planning requires not only technical tools and guidelines but also strong organizational capabilities and continuous capacity development.

From a theoretical perspective, the study reinforces the importance of integrating management theories in healthcare settings. Strategic planning provides direction, RBV emphasizes the importance of human resources as strategic assets, and educational management ensures continuous development of competencies.

- From a practical perspective, the study provides several implications:
- The need to strengthen data systems and promote evidence-based planning
- The importance of competency-based training for planning staff
- The need for better coordination between planning and budgeting processes
- The importance of participatory and decentralized planning approaches
- The integration of educational management into workforce development strategies

In summary, the findings indicate that the effectiveness of strategic planning for health human resources in Puskesmas is influenced by multiple interconnected factors, including data availability, human resource capacity, organizational systems, and policy environments. The transformation from procedural planning to strategic planning requires a comprehensive approach that integrates technical, managerial, and educational dimensions. By strengthening these aspects, Puskesmas can improve their capacity to plan, develop, and utilize health human resources effectively, ultimately enhancing the quality of healthcare services.

CONCLUSION

This study aimed to analyze the strategic planning process for enhancing the capacity of health human resources (HHR) at community health centers (Puskesmas) in Minahasa Regency. Based on the findings and discussion, it can be concluded that the planning process has been formally implemented in accordance with national guidelines; however, its effectiveness remains limited due to various structural, technical, and managerial constraints. First, the planning process across all four stages, preparation, situational analysis, problem formulation, and activity planning (RUK), tends to be procedural rather than strategic. Although the required steps are followed, they are not supported by strong analytical capacity or data-driven decision-making. As a result, planning outputs often do not fully reflect actual workforce needs. Second, the study reveals significant challenges related to the availability, distribution, and competence of health human resources. Workforce shortages,

particularly in certain professions, and uneven distribution across Puskesmas contribute to disparities in service delivery. In addition, limited opportunities for continuous professional development hinder the improvement of workforce competencies. Third, the findings highlight weaknesses in organizational capabilities, including limited planning capacity, weak data systems, and insufficient coordination between stakeholders. These limitations reduce the effectiveness of strategic planning and hinder the implementation of planned activities. Fourth, policy and budget constraints play a significant role in shaping planning outcomes. Misalignment between planning and budgeting processes, as well as top-down directives that override local planning, reduce the autonomy and responsiveness of Puskesmas in addressing their specific needs. From an educational management perspective, the study emphasizes the importance of integrating systematic capacity development into health workforce planning. The application of management functions (Planning, Organizing, Actuating, Controlling/POAC) is essential to ensure that planning processes are not only implemented but also effective and sustainable. Overall, this study concludes that strengthening strategic planning for health human resources requires a comprehensive approach that integrates evidence-based planning, capacity development, organizational strengthening, and policy support. Without such integration, planning processes will remain administrative rather than transformative.

Recommendations

Based on the findings of this study, several recommendations are proposed to improve the effectiveness of strategic planning for health human resources at Puskesmas:

- a. **Strengthening Data Systems and Evidence-Based Planning**
It is essential to develop integrated and reliable data systems for health human resources. Data should be regularly updated and used as the primary basis for planning. The application of workload-based methods, such as Analisis Beban Kerja (ABK), should be strengthened to ensure accurate estimation of workforce needs.
- b. **Enhancing Capacity of Planning Personnel**
Continuous training and capacity development programs should be implemented for planning staff at both the Health Office and Puskesmas levels. These programs should focus on strategic planning, data analysis, and competency-based workforce management. A structured and sustainable training system is needed to ensure long-term improvement.
- c. **Integrating Educational Management into Workforce Development**
Educational management principles should be integrated into health workforce planning. This includes designing competency-based training programs, implementing continuous professional development, and establishing systematic evaluation mechanisms. The POAC framework can be used as a guideline for managing these processes.
- d. **Improving Coordination and Collaboration**

Stronger coordination between Puskesmas and the Health Office is needed to ensure alignment between planning and implementation. In addition, cross-sectoral collaboration should be promoted to address broader determinants of health workforce development.

e. **Aligning Planning and Budgeting Processes**

Planning and budgeting processes should be better integrated to ensure that planned activities can be implemented effectively. Budget allocation should be aligned with identified priorities and provided in a timely manner to avoid delays in program implementation.

f. **Promoting Participatory and Decentralized Planning**

Puskesmas should be given greater autonomy in determining their planning priorities based on local needs. Participatory approaches involving healthcare workers and community stakeholders should be encouraged to improve the relevance and effectiveness of planning outcomes.

g. **Strengthening Policy Support and Governance**

Local governments should provide stronger policy support for health workforce development, including regulations that promote equitable distribution, retention, and capacity building. Clear guidelines and standard operating procedures (SOPs) should also be established to ensure consistency in planning practices.

Implications for Future Research

Future research is recommended to explore the development of innovative models for health workforce planning that integrate digital technologies, data analytics, and competency-based education. Comparative studies across regions may also provide deeper insights into best practices and contextual variations in planning processes.

REFERENCES

- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.
- Bryson, J. M. (2018). *Strategic planning for public and nonprofit organizations: A guide to strengthening and sustaining organizational achievement* (5th ed.). Jossey-Bass.
- Bush, T. (2018). *Theories of educational leadership and management* (5th ed.). Sage Publications.
- Campbell, J., Buchan, J., Cometto, G., David, B., Dussault, G., Fogstad, H., Fronteira, I., Lozano, R., Nyonator, F., Pablos-Méndez, A., Quain, E., Starrs, A., & Tangcharoensathien, V. (2016). Human resources for health and universal health coverage: Fostering equity and effective coverage. *Bulletin of the World Health Organization*, 94(9), 637–639.

- Dolea, C., Stormont, L., & Braichet, J. M. (2017). Evaluated strategies to increase attraction and retention of health workers in remote and rural areas. *Bulletin of the World Health Organization*, 88(5), 379–385.
- Frank, J. R., Snell, L. S., Cate, O. T., Holmboe, E. S., Carraccio, C., Swing, S. R., Harris, P., Glasgow, N. J., Campbell, C., Dath, D., Harden, R. M., Iobst, W., Long, D. M., Mungroo, R., Richardson, D. L., Sherbino, J., Silver, I., Taber, S., Talbot, M., & Harris, K. A. (2016). Competency-based medical education: Theory to practice. *Medical Teacher*, 32(8), 638–645.
- Frenk, J., Chen, L., Bhutta, Z. A., Cohen, J., Crisp, N., Evans, T., Fineberg, H., Garcia, P., Ke, Y., Kelley, P., Kistnasamy, B., Meleis, A., Naylor, D., Pablos-Mendez, A., Reddy, S., Scrimshaw, S., Sepulveda, J., Serwadda, D., & Zurayk, H. (2015). Health professionals for a new century: Transforming education to strengthen health systems. *The Lancet*, 376(9756), 1923–1958.
- Garrison, D. R., & Vaughan, N. D. (2008). *Blended learning in higher education: Framework, principles, and guidelines*. Jossey-Bass.
- Global Health Workforce Network. (2021). *Health workforce strategic directions 2021–2025*. World Health Organization.
- Green, L. W., & Kreuter, M. W. (2020). *Health program planning: An educational and ecological approach* (5th ed.). McGraw-Hill.
- Knowles, M. S., Holton, E. F., & Swanson, R. A. (2015). *The adult learner: The definitive classic in adult education and human resource development* (8th ed.). Routledge.
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.
- Kementerian Kesehatan Republik Indonesia. (2019). *Pedoman perencanaan kebutuhan sumber daya manusia kesehatan*. Kementerian Kesehatan Republik Indonesia.
- Kraaijenbrink, J., Spender, J. C., & Groen, A. J. (2016). The resource-based view: A review and assessment of its critiques. *Journal of Management*, 36(1), 349–372.
- Leithwood, K., & Jantzi, D. (2008). Linking leadership to student learning: The contributions of leader efficacy. *Educational Administration Quarterly*, 44(4), 496–528.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage Publications.
- Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation* (4th ed.). Jossey-Bass.
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). Sage Publications.
- Nurhayati, Rawis, J. A. M., Tambingon, H. N., & Lengkong, J. S. J. (2021). Management strategy for quality improvement of madrasah-based education in North Sulawesi. *International Journal of Science, Technology & Management*, 2(6), 2172–2178. <https://doi.org/10.46729/ijstm.v2i6.366>
- Owens, R. G., & Valesky, T. C. (2015). *Organizational behavior in education: Leadership and school reform* (11th ed.). Pearson.
- Tambingon, H. N., Rawis, J. A. M., Wullur, M. M., Panjaitan, J., Hatibie, M. J., & Oley, M. C. (2024). Principal leadership management. *Return: Study of Management Economic and Business*, 3(7), 527–537.

Analysis of Strategic Planning for Enhancing the Capacity of Health Human Resources at Community
Health Centers (Puskesmas) in Minahasa Regency

Olviae I. Rattu, Jeffry S. J. Lengkong, Joulanda A.M. Rawis, Harol R. Lumapow, Ruth Umbase

- Tintingon, J. Y., Usuh, E. J., & Lengkong, J. S. J. (2024). Implementasi recycling club sebagai strategi pendidikan lingkungan di sekolah dasar. *Genta Mulia*, 15(1), 297–301. <https://ejournal.stkipbbm.ac.id/index.php/gm>
- Umbase, R. S. (2023). Implementing technological pedagogical and content knowledge from the social studies learning management perspective. *International Journal of Learning, Teaching and Educational Research*, 22(11), 401–418. <https://doi.org/10.26803/ijlter.22.11.21>
- World Health Organization. (2020). *State of the world's nursing 2020: Investing in education, jobs and leadership*. WHO Press.