

# Analysis of drug procurement processes in public health administration: a systematic review

*Análisis de los procesos de adquisición de medicamentos en la administración pública de salud: una revisión sistemática*

Received: 17/05/2025 - Accepted: 14/08/2025

Tayron César Troya-Terranova  
<https://orcid.org/0000-0002-9082-6695>  
[ttroya@utb.edu.ec](mailto:ttroya@utb.edu.ec)  
Universidad César Vallejo. Lima, Peru

## Abstract

The study aimed to analyze the relationship between operational management efficiency and drug procurement processes in public hospitals, based on the availability, management, and sustainability of the healthcare system. To this end, a methodology based on the PRISMA approach was used, which allowed for a systematic and comprehensive review of six scientific studies published between 2022 and 2025. The search focused on indexed academic sources, applying inclusion and exclusion criteria that ensured the validity and reliability of the information collected. The findings showed that proper operational management—including strategic planning, skilled leadership, advanced logistics systems, and effective procurement processes—has a positive effect on drug availability, helping to reduce stock shortages and optimize the use of resources. In contrast, inadequate implementation and deficiencies in the application of standards diminish the expected impact, affecting the quality of health services. In conclusion, the analysis demonstrates that administrative efficiency not only optimizes procurement management but also constitutes a fundamental pillar for ensuring timely access to medicines, strengthening financial sustainability, and improving patient care in the public hospital system.

**Keywords:** operational efficiency, administrative management, medicines.

## Resumen

El estudio tuvo como objetivo analizar la relación entre la eficiencia en la administración operativa y los procesos de adquisición de medicamentos en hospitales públicos, a partir de la disponibilidad, la gestión y la sostenibilidad del sistema de salud. Para ello, se empleó una metodología basada en el enfoque PRISMA, que permitió realizar una revisión sistemática y exhaustiva de seis estudios científicos publicados entre 2022 y 2025. La búsqueda se centró en fuentes académicas indexadas, aplicando criterios de inclusión y exclusión que garantizaron la validez y fiabilidad de la información recopilada. Los hallazgos evidenciaron que una gestión operativa adecuada —que incluye la planificación estratégica, el liderazgo capacitado, los sistemas logísticos avanzados y los procesos de contratación eficaces— genera un efecto positivo en la disponibilidad de medicamentos, lo que contribuye a reducir las deficiencias de stock y a optimizar el uso de los recursos. En contraste, la falta de implementación adecuada y las deficiencias en la aplicación de normas disminuyen el impacto esperado, afectando la calidad del servicio de salud. En conclusión, el análisis demuestra que la eficiencia administrativa no solo optimiza la gestión de adquisiciones, sino que también constituye un pilar fundamental para garantizar el acceso oportuno a medicamentos, fortalecer la sostenibilidad financiera y mejorar la atención a los pacientes en el sistema hospitalario público.

**Palabras clave:** eficiencia operativa, gestión administrativa, medicamentos.

## Introduction

How are the processes for the acquisition of medications carried out within public health administration, and what factors influence their efficiency, transparency, and regulatory compliance? This is a central question, as public health administration must adhere to a series of procedures that include needs assessment, tendering, contracting, oversight, and distribution. All these stages are aimed at ensuring a continuous and transparent supply, based on the principles of legality, efficiency, and quality (Vallés, 2024).

The demand for medications in health centers arises from epidemiological information, consumption history, and resource availability. Based on this, the processes of tendering and supplier selection are executed

through public procurement mechanisms governed by current regulations. Once contracts are awarded, purchases are formalized, and logistical aspects are managed by monitoring compliance with deliveries (Iglesias et al., 2020).

Currently, the supply of medications in public pharmaceutical centers is essential to guarantee the right to health and to contribute to the improvement of the population's quality of life (Organización Mundial de la Salud [OMS], 2024). In numerous countries, especially those with fragmented or developing health systems, the acquisition of medications constitutes one of the most sensitive aspects of public management (Valeria, 2021). Hence, there is a need to examine how these processes interact within the context of public health administration, employing a systematic approach that allows for the identification of patterns, challenges, best practices, and knowledge gaps.

The central issue of this study lies in the inefficiencies, lack of transparency, and exposure to irregular practices in the mechanisms of medication acquisition. These deficiencies generate consequences that not only affect the financial viability of health systems but also limit equitable access to essential medical treatments for citizens (Tello, 2025). Frequently, the absence of adequate planning, institutional weaknesses, and excessive bureaucracy hinder this process, resulting in shortages, increased costs, or even instances of corruption (Vázquez, 2024).

The relevance of addressing this issue stems from its direct link to social welfare and equity. The procurement of medications should not be understood merely as an administrative procedure but as a state action that directly impacts the lives and health of the population. In this regard, the Organic Health Law (Ley Orgánica de Salud, 2015) and the Organic Law of the National Public Procurement System (Ley Orgánica del Sistema Nacional de Contratación Pública, 2024) establish the regulatory framework that organizes processes, defines involved actors, regulates practices, and recognizes existing obstacles. Analyzing these laws allows for the identification of opportunities for improvement and institutional strengthening.

Therefore, this research aims to contribute to the understanding of the problem from a critical and propositional perspective, grounded in scientific evidence. Through a systematic and thorough analysis, the objective is to provide a comprehensive view that supports strategic decision-making in public hospitals, particularly concerning the economic sustainability of hospital institutions. The study presents the employed methodology, key findings, and a critical reflection, with the purpose of offering tools that guide both institutional administrators and public policy makers toward more sustainable, efficient, and equitable healthcare models.

## Methodology

The study is framed within a qualitative approach, based on a systematic review of a descriptive and inferential nature. The purpose was to examine and synthesize existing information regarding the difficulties and strategies related to the processes of medication acquisition within public health administration. The application of the PRISMA methodology allowed for the development of an organized, transparent, and replicable procedure, ensuring academic rigor in identifying significant financial management practices, as well as the internal and external factors influencing the economic viability of these institutions.

### 1. Identification stage

In this phase, scientific literature related to the financial sustainability of public and private hospitals in Ecuador was examined and collected, specifically focusing on medication acquisition processes. A systematic search was conducted in recognized academic databases such as ERIC, Scopus, Dialnet, Springer, and Google Scholar. The searches were structured using key terms such as "private hospitals," "hospital management," "public hospitals," "healthcare management," and "resource allocation," complemented by Boolean operators (AND, OR) to optimize the relevance of the results.

**Table 1**  
*Search strategy for the study*

Database	Keywords with Boolean operators	Identified studies
ERIC	("financial sustainability" AND "public hospitals") OR ("private hospitals" AND "healthcare management")	32 studies
Scopus	("hospital finance" AND "sustainability") OR ("health policy" AND "public-private healthcare")	47 studies
Dialnet	("sostenibilidad financiera" AND "hospitales públicos") OR ("gestión hospitalaria" AND "sector privado")	25 studies

Google Scholar	("financial sustainability" AND "healthcare systems") OR ("cost-efficiency" AND "hospital management" AND "Ecuador")	65 studies
Springer	("hospital management" AND "resource allocation") OR ("health sector" AND "public-private partnership" AND "Latin America")	12 studies

In total, 181 records were identified; after the removal of 26 duplicate studies, 155 studies remained for the selection stage.

## 2. Selection stage

To ensure the quality and relevance of the studies, inclusion and exclusion criteria were applied based on the PRISMA model.

### Inclusion criteria:

- Articles published between January 2020 and March 2025.
- Publications in Spanish and English.
- Research focused on medication acquisition processes in public health administration.
- Studies developed in the hospital sector or in directly related contexts.

### Exclusion criteria:

- Duplicate articles or those in languages other than Spanish or English.
- Research on areas not related to medication acquisition in public administration.
- Works lacking access to the full text or with insufficient methodological rigor.
- Opinions, essays, or editorials without scientific basis.

## 3. Eligibility stage

Of the 155 selected studies, titles and abstracts were reviewed. In this phase, 78 articles were discarded for not aligning with the research objectives. From the remaining 77 studies, efforts were made to retrieve the full text, but 45 could not be accessed due to restrictions.

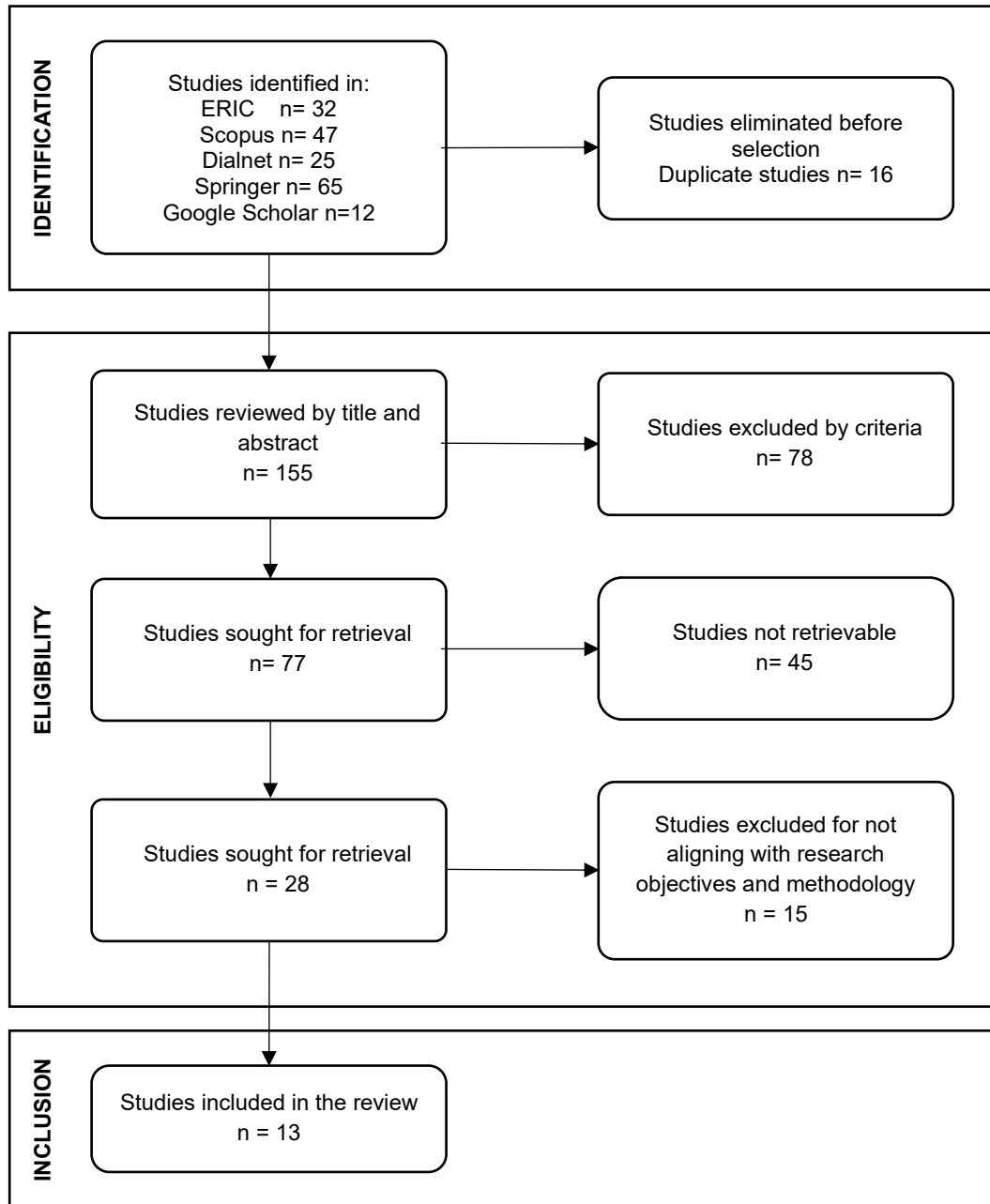
Subsequently, another 15 studies were excluded after complete review for the following reasons:

- Lack of methodological relevance.
- Application contexts differing from the public hospital medication acquisition sector.

## 4. Inclusion and synthesis stage

Finally, 13 studies that met all selection and eligibility criteria were included. These articles underwent detailed analysis to extract relevant findings regarding medication acquisition practices in the public health system, their benefits, and the limitations affecting the sustainability and efficiency of the process.

**Figure 1**  
PRISMA flow diagram



## Results and discussion

Based on the review of the 13 selected articles, the most relevant findings regarding the administrative, operational, and economic factors influencing the acquisition of medications in public hospitals are presented. The results are organized into two main thematic axes:

### a. Administrative and operational factors in medication acquisition in hospitals

The reviewed studies agree that administrative and operational factors play a crucial role in the efficiency of medication acquisition processes.

**Table 2***Results of the systematic review focused on administrative and operational factors*

No.	Authors (Year)	Title	Study Type	Results	Relation to administrative and operational factors
1	(Pizarro et al., 2022)	Optimization of Economic Resources for the Purchase of Medications and Medical Supplies Using Deterministic and Stochastic Mathematical Models	Non-experimental quantitative design, data collected through the National Public Procurement System (SERCOP) portal	\$59 million was invested in purchases of medications and supplies from 2017 to 2020. Processes involved direct purchases from suppliers due to shortages. The application of proposed deterministic and stochastic inventory models can address these problems to optimize resources.	The lack of proper planning and reaction to product shortages leads to decisions made without preparation, such as hasty direct purchases. Their suggestion to apply mathematical models for inventory management not only improves resource utilization but also proposes a fundamental change in decision-making methods in administration.
2	(Macias et al., 2024)	Audit of Public Procurement Processes in Ecuadorian Health Units	Basic, non-experimental, and descriptive research exposing the importance of auditing as a control process for public procurement	It concludes that auditing public purchases in the health sector in Ecuador serves as a control expression over inadequate behaviors that not only tarnish the system's image but also threaten the quality of care and population satisfaction with the services provided.	Their research indicates that inadequate controls in procurement processes can lead to irregularities, damaging the institution's reputation and affecting service quality. Thus, auditing is not merely an administrative task; it is an operational necessity to ensure transparency, efficiency, and public trust.
3	(Rodríguez, 2021)	Factors Influencing the Allocation of Economic Resources and Budget Execution at Chone Basic Hospital – IESS	Non-experimental research with a cross-sectional, exploratory, and descriptive design	The results allow determining the influence of certain factors on budget allocation and execution. Lack of knowledge regarding planning, evaluation, control, and budget execution reveals inadequate training of personnel in various areas, although financial staff may possess better training.	The study shows that insufficient training of administrative personnel hinders the operational effectiveness of the institution, causing budget deviations that complicate the timely acquisition of essential medications and the achievement of strategic goals.
4	(Mazón et al., 2023)	Management of Public Procurement Processes and Their Impact on the Logistics of Public Hospitals:	A bibliographic review conducted through databases (such as Scopus, Web of Science, and Direct Science), registering	Transparency in procurement processes and accountability is crucial, as corruption and regulatory non-compliance are significant concerns. In the health sector, the need to procure certain products and services is common.	The study emphasizes that procurement management in public health should focus not only on transparency and legality but also on operational efficiency in logistics. Their analysis advocates for a more rigorous

	A Bibliographic Review Article	information and generating discussion	Managing delivery times is essential to ensure continuity of health care.	administrative approach and a more agile operational process, especially in situations where time is a critical resource.
5	(Alcántara et al., 2022)	Strategic Management Applied to the Procurement Process of a Public Hospital	Document analysis technique at the descriptive level, with a quantitative approach, non-experimental design	It can be noted that state purchases in public hospitals are not executed completely due to a lack of coordination with the involved user areas, considering the regulations governing procurement processes. The study suggests that strategic management requires stronger leadership and a more structured operational coordination, key factors for improving procurement processes.
6	(Cajo & Negrete, 2025)	Government Policies and Their Impact on the Supply of Medications and Medical Devices at the Provincial General Teaching Hospital of Riobamba, MSP, Period 2021-2023	Longitudinal descriptive quantitative analysis examined the evolution of supply and its relation to the Substitute Regulation (AGREEMENT 0051-2020), the "Medicine Close" Plan (Decree 378)	Budget execution reached historical levels of 100% for devices and 94% for medications in 2022, demonstrating a significant improvement in management efficiency. The sequential and adaptive implementation of policies can substantially enhance supply management, although opportunities to consistently achieve the 90% target set by MSP remain. Analyzing proposals like the Substitute Regulation and the "Medicine Close" Plan shows that phased, flexible, and technically supported implementation can significantly increase efficiency in both administration and operations, although challenges still need to be addressed.
7	(Villacrés & Mena, 2021)	Payment Mechanisms and Financial Resource Management for the Consolidation of the Health System in Ecuador	Systematic analysis through databases such as PubMed, Scielo, LILACS Ecuador, and LILACS	The implementation of these modifications can generate improvements in the health system regarding efficiency, risk dispersion, incentives for achieving health objectives, and contribute to sustainability and progress toward universal health coverage. However, legal, political, and operational limitations hinder their implementation. Financial management from a broader perspective of the health system indicates that, although payment methods are designed to enhance efficiency and sustainability, legal, political, and operational constraints complicate their correct application. This discrepancy between technical design and actual execution emphasizes the urgent need to improve the administrative and operational capacities of the system to achieve equitable and effective coverage.

From an economic perspective, the research by Pizarro et al. (2022) and Rodríguez (2021) reveals deficiencies in budget management, reflected in low spending execution, limited coordination between financial and technical areas, and hasty decision-making in response to resource shortages. On the administrative front, the studies by Macías et al. (2024) and Alcántara et al. (2022) emphasize the lack of experience and training

among personnel responsible for public procurement, accompanied by weak application of regulations and audits. These shortcomings generate a lack of transparency, impact the quality of spending, and hinder the traceability of procurement processes.

Regarding operational factors, studies such as those by Mazón et al. (2023) and Cajo and Negrete (2025) highlight the importance of logistics management, the implementation of public policies, and the application of rigorous controls to optimize supply. Elements such as supplier monitoring, delivery time management, and the use of digital tools still face limitations but are considered critical for ensuring continuity in hospital care. Finally, the research by Villacrés and Mena (2021) broadens the discussion by noting that despite efforts to modernize payment and financing mechanisms, political obstacles persist that restrict their effectiveness, limiting the expected impact on system improvement.

**b. Impact of operational efficiency and economic viability of hospitals**

The analysis of the selected articles highlights the close relationship between operational efficiency and the economic viability of hospital institutions concerning medication acquisition.

**Table 2**

*Results of the systematic review on the impact of administrative operational efficiency*

No.	Authors (Year)	Title	Study Type	Results	Relation to administrative and operational factors
1	(Borja & Negrete, 2025)	The Acquisition of Medications Classified as SICM2022 and Its Impact on the Supply of Medications at the Provincial General Teaching Hospital of Riobamba, Period 2022 to 2023	Longitudinal descriptive quantitative analysis, examining 270 observations using statistical tools	Dynamic and adaptive purchasing strategies, rather than maintaining high stock levels, were shown. The transformative impact of ministerial guidelines was evident in the 51.58% increase in medication availability and a significant reduction in stockouts.	Effective administrative operations can positively influence the availability of medications. The study demonstrates that efficient management, based on longitudinal statistical analysis, can optimize resources and facilitate timely access to essential health supplies.
2	(Jara & Rosas, 2024)	Acquisition of Goods and Services and Administrative Management in a Public Hospital in Lima	Qualitative descriptive study involving a population of 30 executives surveyed via two validated and reliable questionnaires	The process of acquiring goods and services and administrative management in HGAI-ESSALUD of Lima ( $r = 0.050$ and $p\text{-value} = 0.794$ ) indicates that despite the procurement and contracting system of the entity (Supreme Decree No. 082-2019-EF, State Procurement Law and its regulations) being adequate, it has not translated into positive results.	The operational efficiency of the administration does not yield positive outcomes, but the study reveals a slight correlation between administrative management and the acquisition of goods, suggesting that having a regulatory framework also underscores the need to strengthen institutional and human capacities within hospital structures to achieve concrete results.
3	(Faz et al., 2023)	Public Procurement in Ecuador: Analysis and Perspective	Methodology based on review and documentary analysis, considering	The results indicate that the lack of annual planning and budget allocation is a key issue that must be resolved in public procurement in the	Administrative efficiency in public procurement in Ecuador faces significant obstacles, particularly in annual planning and proper

			current laws and regulations	country. It is important and necessary to implement the new procedures established by the Organic Law of the National Public Procurement System to create a transparent, efficient, and dynamic procurement system that broadly benefits the nation and its inhabitants.	budget allocation, emphasizing the urgent need to implement modern and transparent mechanisms as detailed in the Organic Law of the National Public Procurement System to improve efficiency and reduce delays and excessive costs.
4	(Vargas, 2022)	Analysis of Supply Management in Hospital Logistics	The study is qualitative descriptive, focused on being a review article on hospital logistics in the handling of medications by health centers	The results showed that improvement models such as synchronized supply chains, SIPOC, Economic Order Quantity, and periodic and continuous reviews have been proposed. Studies aimed at establishing continuous improvement strategies were also found, but focused on certain phases of hospital logistics, such as control, production, and distribution of medications to the final consumer or patient.	The adoption of effective operational models can revolutionize the administration of medication supply, and operational effectiveness in management is reflected in the hospital's ability to oversee and coordinate critical stages such as production, storage, and distribution, ensuring that patients receive their medications promptly.
5	(Cerdeira-Bustos, 2023)	Effects of New Public Management on Performance: Analysis of Chilean Public Hospitals	Based on data from 181 Chilean public hospitals through the Public High Management System (SADP)	The effects on performance of a reform inspired by New Public Management show that incorporating management-capable professionals into high-level positions in Chilean public hospitals improves their performance, highlighting the importance of professional profiles.	The New Public Management reform in Chile demonstrates that operational efficiency in public hospitals is deeply linked to the quality of administrative leadership. Effective direction from upper management allows for greater coherence in the application of procurement processes in healthcare.
6	(Ramirez, 2023)	Efficient Mechanisms Related to the Analysis of Public Procurement in Ecuador	The study is systematic, controlled, critical, and creative	The efficient mechanisms related to the analysis of public procurement in Ecuador indicate that public procurement is part of both government and state-owned enterprises for goods, services, and works, making this procurement a	Effective mechanisms can turn this activity into a driver of economic and operational efficiency in the health sector. The study highlights the need to review and update institutional procedures to ensure that operations align with the

---

substantial part of taxpayer money and boosting the health system. strategic objectives of the country's economy.

---

The study by Borja and Negrete (2025) presents a successful case where the implementation of a ministerial catalog (SICM2022) increased the availability of medications, consolidating management based on data and clear objectives. However, as Jara and Rosas (2024) suggest, the mere existence of a regulatory framework does not guarantee real improvements, as difficulties arise when regulation is not accompanied by effective execution in practice, reinforcing the need for skilled managers.

Similarly, Faz et al. (2023) emphasize the importance of strategic planning, noting that a lack of adequate economic and financial resources can lead to collapses in the procurement system. In a related vein, Vargas (2022) highlights that efficient logistical models such as EOQ and SIPOC enhance the flows of medications, reduce timelines, and ensure timely availability.

On the other hand, Cerda-Bustos (2023) underscores that technical leadership in management positions is a decisive factor for achieving effective management, while Ramírez (2023) points out the importance of public procurement mechanisms, whose proper use optimizes financial efficiency and ensures responsible use of resources.

## Conclusions

The detailed analysis of the reviewed studies demonstrates that operational effectiveness in management is an essential factor for the success of medication acquisition processes in public hospitals. A strategic administration, grounded in efficient organization, strong technical leadership, well-structured logistics, and clear procurement procedures, not only increases the availability of medical supplies but also optimizes the use of public resources. This, in turn, strengthens the viability of the health system and enhances the quality of service provided to patients.

Conversely, the absence of effective implementation, adequate planning, or firm leadership constitutes a significant obstacle that limits the impact of current regulations and reduces the efficiency of procurement processes, jeopardizing the sustainability of the system and the timely care of the population.

## References

- Alcántara, Z. D., Nuñez, J. K., Gonzales, M. A., & Callao, M. (2022). Gestión estratégica aplicada al proceso de compras de un hospital público. *Revista Científica Emprendimiento Científico Tecnológico*, 3(1), 1-14. <https://doi.org/10.54798/RRPI9609>
- Borja, B. A., & Negrete, O. P. (2025). La adquisición de medicamentos catalogados SICM2022 y su incidencia en el abastecimiento de medicamentos del Hospital Provincial General Docente de Riobamba, periodo 2022-2023. *Tesla Revista Científica*, 5(1), e449. <https://doi.org/10.55204/trc.v5i1.e449>
- Cajo, H. G., & Negrete, O. P. (2025). Políticas gubernamentales y su incidencia en el abastecimiento de medicamentos y dispositivos médicos en el Hospital Provincial General Docente Riobamba del MSP, periodo 2021-2023. *Tesla Revista Científica*, 5(1), e448. <https://doi.org/10.55204/trc.v5i1.e448>
- Cerda-Bustos, M. M.-C.-G. (2023). Efectos de la Nueva Gestión Pública en el desempeño: análisis de los hospitales públicos chilenos. *Revista de Salud Pública*, 21(3), 292-298. <https://doi.org/10.15446/rsap.v21n3.77323>
- Faz, W. E., Fuentes, L. E., Hidalgo, M., & Guerrero, K. G. (2023). La contratación pública en el Ecuador: análisis y perspectiva. *Revista Ciencia y Tecnología*, 27(119), 316-4821. <https://doi.org/10.47460/uct.v27i119.714>
- Iglesias, I. A., Rovira-Vilab, M., Izko-Gartziac, N., Pérez-Rodríguez, O., Rodríguez-Rincón, R., & Álvarez-Arroyoe, L. (2020). Suministro de medicamentos desde hospitales a centros de atención primaria y gestión de la calidad. *Revista Farmacéuticos de Atención Primaria*, 17(3), 123-134. <https://www.elsevier.es/es-revista-farmacuticos-atencion-primaria-317-articulo-suministro-medicamentos-desde-hospitales-centros-X217237611103295X>
- Jara, C. A., & Rosas, C. E. (2024). Adquisición de bienes y servicios y la gestión administrativa en hospital público de Lima. *UCV Hacer*, 13(1), 43-51. <https://doi.org/10.18050/revucvhacer.v13n1a4>
- Ley Orgánica de Salud. (2015). Registro Oficial Suplemento 423 de 22 de diciembre de 2006. Ministerio de Salud Pública del Ecuador. <https://www.salud.gob.ec/wp-content/uploads/2017/03/LEY-ORG%C3%81NICA-DE-SALUD4.pdf>

- Ley Orgánica del Sistema Nacional de Contratación Pública. (2024). Última reforma: Registro Oficial 575, 10 de junio de 2024. Servicio Nacional de Contratación Pública. [https://www.sot.gob.ec/wpfd\\_file/12-ley-organica-del-sistema-nacional-de-contratacion-publica/](https://www.sot.gob.ec/wpfd_file/12-ley-organica-del-sistema-nacional-de-contratacion-publica/)
- Macías, E., Vásconez, V., Vásconez, H., & Mayorga, M. (2024). Auditoría a los procesos de compras públicas en unidades de salud ecuatorianas. *Revista Cubana de Reumatología*, 26(1), e1259. [https://revreumatologia.sld.cu/index.php/reumatologia/article/view/1259/pdf\\_1](https://revreumatologia.sld.cu/index.php/reumatologia/article/view/1259/pdf_1)
- Mazón, J. E., & Haro, A. G. (2023). Gestión de procesos de compras públicas y su incidencia en la logística de los hospitales públicos: Artículo de revisión bibliográfica. *Revista Polo del Conocimiento*, 8(11), 466-473. <https://doi.org/10.23857/pc.v8i11.6219>
- Organización Mundial de la Salud. (2024, 25 de septiembre). Medicamentos esenciales. <https://www.who.int/es/news-room/fact-sheets/detail/essential-medicines>
- Pizarro, K., Ruilova, M., & Martínez, O. (2022). Optimización de recursos económicos para compras de medicamentos e insumos médicos, aplicando modelos matemáticos determinísticos y estocásticos. *Journal of Science and Research*, 7(1), 80-99. <https://doi.org/10.5281/zenodo.6506085>
- Ramírez, S. P. (2023). Mecanismos eficientes, referentes al análisis de la contratación pública en el Ecuador. *Ciencia Latina Revista Científica Multidisciplinar*, 7(2), 8450-8467. [https://doi.org/10.37811/cl\\_rcm.v7i2.5968](https://doi.org/10.37811/cl_rcm.v7i2.5968)
- Rodríguez, G. A. (2021). Factores que inciden en la asignación de recursos económicos y en la ejecución presupuestaria en el Hospital Básico Chone – IESS. *Digital Publisher CEIT*, 7(3), 30-47. <https://doi.org/10.33386/593dp.2022.3-1.1020>
- Tello, P. J. (2025). Desafíos y estrategias de sostenibilidad financiera en los hospitales públicos y privados del Ecuador. [Tesis de maestría, Universidad de las Américas]. Repositorio Institucional UDLA. <https://dspace.udla.edu.ec/bitstream/33000/17544/1/UDLA-EC-TMGIS-2025-30.pdf>
- Valeria, A. R. (2021). Análisis de la gestión y procedimientos del suministro de medicamentos en el servicio de farmacia, Centro de Salud La Vicentina y propuesta de mejora. [Tesis de pregrado, Universidad Central del Ecuador]. Repositorio Institucional UCE. <https://www.dspace.uce.edu.ec/entities/publication/5d26e7f3-39f4-4b15-9a6b-712c1e633baf>
- Vallés, V. (2024, 26 de agosto). La cadena de suministro en la industria farmacéutica: Aspectos clave. <https://acortar.link/3ec2dt>
- Vargas, J. S. (2022). Análisis de la gestión de abastecimiento en la logística hospitalaria. *Revista Científica Anfibios*, 5(2), 110-125. <https://doi.org/10.37979/afb.2022v5n2.117>
- Vázquez, S. M. (2024). La debilidad de las instituciones como instrumento político. *Revista Mexicana de Ciencias Políticas y Sociales*, 69(251), 143-156. <https://doi.org/10.22201/fcpys.2448492xe.2024.251.84524>
- Villacrés, T., & Mena, A. C. (2021). Mecanismos de pago y gestión de recursos financieros para la consolidación del sistema de salud de Ecuador. *Revista Panamericana de Salud Pública*, 41(8), e51. <https://www.scielo.org/article/rpsp/2017.v41/e51/es>