



BUILDING RESILIENT HEALTH SYSTEMS: Key points and essential takeaways for combating corruption and improving population health

CONSTRUYENDO SISTEMAS DE SALUD RESILIENTES: Puntos principales y perspectivas esenciales para combatir la corrupción y mejorar la salud poblacional

CRÉER DES SYSTÈMES DE SANTÉ RÉILIENTS: Principaux points et perspectives essentielles pour lutter contre la corruption et améliorer la santé de la population

CONSTRUINDO SISTEMAS DE SAÚDE RESILIENTES: Principais pontos e perspectivas essenciais para combater a corrupção e melhorar a saúde da população

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ABSTRACT

Introduction: this publication explores systemic challenges, the impact of corruption on health outcomes, and strategic visions for building resilient health systems in response to the global reality that many systems fail to improve population health, meet legitimate expectations, or protect against catastrophic medical expenses. **Objective:** to develop a qualitative synthesis of eleven peer-reviewed publications by the author, generating new insights and knowledge to contribute to the creation of resilient health systems. **Methods:** literature on health system strengthening, resilience,

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and corruption was analyzed using qualitative analysis methods. Data mining techniques were employed to identify patterns and trends, resulting in 44 key points and 44 essential takeaways. Collaborative approaches, leadership dynamics, and other publications were examined to propose actionable reform solutions. **Results:** Widespread corruption and inefficiencies in health systems hinder progress and erode public trust. A multifaceted approach is crucial for building resilient health systems, addressing systemic failures and persistent inequalities through a multisectoral approach with real-world insights and proven methodologies. Collaborative efforts and learning from international experiences enhance strategic vision and the support needed to achieve goals. **Conclusions:** Health governance, effective leadership, and comprehensive educational models are vital for building resilient health systems and overcoming entrenched corruption. Comprehensive reforms, including the restructuring and revitalization of health systems and the implementation of effective governance models, are essential.

Keywords: Strengthening; Health systems; Reform; Health sector; Corruption and health; Health steering; Health governance; Health stewardship; Resilient systems.

RESUMEN

Introducción: esta publicación explora los desafíos sistémicos, el impacto de la corrupción en los resultados sanitarios y visiones estratégicas para construir sistemas de salud resilientes frente a la realidad global de que muchos sistemas no logran mejorar la salud de sus poblaciones, satisfacer sus expectativas legítimas o protegerlas de gastos médicos catastróficos. **Objetivo:** desarrollar una síntesis cualitativa de once publicaciones del autor revisadas por pares para generar nueva inteligencia y conocimiento para contribuir a crear sistemas de salud resilientes. **Métodos:** se analizó literatura sobre fortalecimiento de sistemas de salud, resiliencia y corrupción utilizando métodos de análisis cualitativo. Se emplearon técnicas de minería de datos para identificar patrones y tendencias, generando 44 puntos principales y 44 perspectivas esenciales. Se examinaron enfoques colaborativos, dinámicas de liderazgo y otras publicaciones para proponer soluciones de reforma accionables. **Resultados:** la corrupción generalizada y las ineficiencias en los sistemas de salud obstaculizan el progreso y erosionan la confianza pública. Un enfoque multifacético es crucial para construir sistemas de salud resilientes, abordándose fallas sistémicas y desigualdades persistentes de manera multisectorial con conocimientos de mundo real y metodologías comprobadas. Los esfuerzos colaborativos y el aprendizaje de experiencias internacionales mejoran la visión estratégica y el apoyo requerido para alcanzar metas. **Conclusiones:** la rectoría en salud, el liderazgo efectivo y los modelos educativos integrales son vitales para construir sistemas de salud resilientes y superar la corrupción arraigada. Son esenciales las reformas integrales, incluyendo la reestructuración y revitalización de los sistemas de salud y la implementación de modelos de gobernanza efectivos.

Palabras Clave: Fortalecimiento; Sistemas de salud; Reforma; Sector salud; Corrupción y salud; Rectoría en salud; Gobernanza en salud; Mayordomía en salud; Sistemas resilientes.

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RÉSUMÉ

Introduction: Cette publication explore les défis systémiques, l'impact de la corruption sur les résultats de santé et les visions stratégiques pour construire des systèmes de santé résilients face à la réalité mondiale selon laquelle de nombreux systèmes ne parviennent pas à améliorer la santé de leurs populations, à répondre à leurs attentes légitimes ou à les protéger des frais médicaux catastrophiques. **Objectif:** Développer une synthèse qualitative de onze publications d'auteurs évaluées par des pairs pour générer de nouvelles informations et connaissances afin de contribuer à la création de systèmes de santé résilients. **Méthodes:** La littérature sur le renforcement des systèmes de santé, la résilience et la corruption a été analysée à l'aide de méthodes d'analyse qualitative. Des techniques d'exploration de données ont été utilisées pour identifier des modèles et des tendances, générant 44 points principaux et 44 perspectives essentielles. Les approches collaboratives, la dynamique du leadership et d'autres documents ont été examinés pour proposer des solutions de réforme réalisables. **Résultats:** La corruption généralisée et l'inefficacité des systèmes de santé entravent les progrès et érodent la confiance du public. Une approche multidimensionnelle est essentielle pour construire des systèmes de santé résilients, en s'attaquant aux défaillances systémiques et aux inégalités persistantes de manière multisectorielle, avec des connaissances concrètes et des méthodologies éprouvées. Les efforts de collaboration et les enseignements tirés des expériences internationales améliorent la vision stratégique et le soutien nécessaire pour atteindre les objectifs. **Conclusions:** la rectoría en salud, el liderazgo efectivo y los modelos educativos integrales son vitales para construir sistemas de salud resilientes y superar la corrupción arraigada. Des réformes globales, notamment la restructuration et la revitalisation des systèmes de santé et la mise en œuvre de modèles de gouvernance efficaces, sont essentielles.

Mots-clés: Renforcement; Systèmes de santé; Réforme; Secteur de la santé; Corruption et santé; Gouvernance santé; Gouvernance de la santé; Gestion de la santé; Des systèmes résilients.

RESUMO

Introdução: A presente publicação explora os desafios sistêmicos, o impacto da corrupção nos resultados de saúde e visões estratégicas para construir sistemas de saúde resilientes diante da realidade global de que muitos sistemas não conseguem melhorar a saúde de suas populações, satisfazer suas expectativas legítimas ou protegê-las de gastos médicos catastróficos. **Objetivo:** Desenvolver uma síntese qualitativa de onze publicações do autor revisadas por pares para gerar nova inteligência e conhecimento, contribuindo para a criação de sistemas de saúde resilientes. **Métodos:** Se realizou uma síntese da literatura sobre fortalecimento de sistemas de saúde, resiliência e corrupção utilizando métodos de análise qualitativa. Se utilizou técnicas de mineração de dados para identificar padrões e tendências, gerando 44 principais pontos e 44 perspectivas essenciais. Abordagens colaborativas, dinâmicas de liderança e outras publicações foram examinadas para propor soluções de reforma que podem ser aplicadas. **Resultados:** A corrupção generalizada e as ineficiências nos sistemas de saúde impedem o progresso e corroem a confiança pública. Uma abordagem multifacetada é crucial para construir sistemas de saúde resilientes, abordando falhas

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sistêmicas e desigualdades persistentes de maneira multissetorial com conhecimentos do mundo real e metodologias comprovadas. Esforços colaborativos e o aprendizado de experiências internacionais aprimoram a visão estratégica e o apoio necessário para alcançar metas. **Conclusões:** A governança em saúde, a liderança eficaz e modelos educacionais integrados são vitais para construir sistemas de saúde resilientes e superar a corrupção enraizada. Reformas abrangentes, incluindo a reestruturação e revitalização dos sistemas de saúde e a implementação de modelos de governança eficazes, são essenciais.

Palavras-Chave: Fortalecimento; Sistemas de saúde; Reforma; Setor de saúde; Corrupção e saúde; Governança em saúde; Administração em saúde; Sistemas resilientes.

INTRODUCTION

A resilient health system is one that has the capacity to prepare for, respond to, and effectively adapt to crises and challenges, maintaining its essential functions and improving its ability to face adverse events, including the impact of systemic corruption. ⁽¹⁻⁵⁾ These systems are not only capable of managing emergencies but also learn and transform in response to crises, continuously improving the quality and equity of healthcare. ⁽⁶⁻¹⁰⁾ According to the World Health Organization (WHO) report, a resilient health system must have a robust structure, adequate financing, trained personnel, access to information, and good governance that allows for multisectoral collaboration and community participation. ^(1, 11-13)

The author has published original qualitative peer-reviewed articles on health systems strengthening and the intersection between corruption and health. Although the primary focus is on the Guatemalan health system, the articles have global applicability and highlight fundamental challenges that all nations face in improving the well-being of their populations and fostering socioeconomic development.

Strengthening health systems is a key component in building resilient health systems. ⁽¹⁴⁻¹⁹⁾ However, for these systems to be truly resilient, they must be free from corruption. Corruption weakens the system by diverting resources and reducing the effectiveness of response and recovery during crises. Therefore, addressing corruption and strengthening health systems are interrelated steps that are essential for building a health system that not only functions well in normal times but can also adapt and recover effectively in the face of the emergencies and crises of the 21st century. ^(5,11-13)

This publication aims to be a valuable resource for academic and professional settings, empowering students and supporting professionals to improve the performance of health systems. By promoting evidence-based decision-making, it seeks to optimize resource use, improve outcomes in health, education, and development, and ensure the best return on investment. Additionally, it emphasizes the importance of maximizing impact, sustainability, and scalability of benefits, contributing to more effective and resilient health systems.

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II. MÉTHODS

The critical challenge of this publication was to extract new knowledge and evidence about public health systems, similar to data mining and business intelligence. ⁽²⁰⁻²²⁾ This was achieved by synthesizing six years of exhaustive research using qualitative methods, such as literature reviews, inductive techniques, document analysis, interviews with key informants and focus groups, and content, thematic, and narrative analysis. The author's executive leadership experience in the public, private, and non-profit sectors, as well as with international organizations in over 20 countries, was also essential.

A qualitative synthesis was developed on eleven peer-reviewed articles regarding the strengthening of health systems and corruption. The validity, relevance, and originality of this synthesis in generating new knowledge have been widely demonstrated. ⁽²³⁻²⁵⁾ Qualitative synthesis is a process that integrates and analyzes the results of qualitative studies by interpreting and unifying findings through the identification of patterns, themes, and meanings. This approach provides a deeper and more holistic understanding of the phenomena investigated, offering a perspective that is often not captured through quantitative methods. By combining, analyzing, and interpreting results from qualitative studies, it facilitates the development of a richer and more comprehensive understanding of the topic studied, thereby contributing to the generation of new intelligence, perspectives, theories, and knowledge in the field of research. ⁽²⁶⁻²⁹⁾

Consequently, the objective was to generate new intelligence and knowledge through the extraction of key points and essential takeaways to contribute to the creation of more resilient and equitable health systems. Data mining techniques were also employed to identify patterns and trends (*classification, clustering, association analysis, time series analysis, text analysis, and principal component analysis*), ⁽³⁰⁻³²⁾ highlighting the impact of corruption on healthcare efficiency, governance models, and economic assessments. Additionally, collaborative approaches, leadership dynamics, and other publications on resilient health systems were analyzed to propose practical solutions and sustainable reforms.

The integration of 44 key points and 44 essential takeaways from the eleven publications provided a strategic framework for analyzing health systems. This approach addresses systemic challenges comprehensively, justifying the need to tackle the multifaceted nature of corruption and inefficiencies. By distilling these insights, practical and visionary intelligence was generated to enhance the performance and effectiveness of health systems. The *Key Points* highlight central ideas or concepts that summarize the most important information from each publication, including fundamental issues and objectives. The *Essential Takeaways* represent the most important conclusions that the reader should remember after reading this article, including a synthesis of general themes and strategic directions. Together, they form a narrative that guides the development of evidence-based solutions, tailored to both local and global contexts, and ensures that health systems are better prepared to drive reforms and improve public health outcomes.

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III. ANALYSIS OF RESULTS

The publication **Corruption and Health 7: Epidemic, Endemic, and Pandemic Corruption in the Guatemalan Health System Due to the Absence of Effective Health Governance** examines the widespread corruption in Guatemala’s health system and proposes effective measures to address it. Its goal is to provide the newly elected government for the 2024-2027 term with knowledge and evidence to restore leadership (stewardship) in the health system and combat corruption. ⁽³³⁾ The attached table summarizes its key points and essential takeaways, followed by a detailed narrative description.

	KEY POINTS	ESSENTIAL TAKEAWAYS
1	Widespread Corruption	Restoring Health Stewardship
2	Diverse Research Methodology	Systemic Approach
3	Health System Stewardship (governance)	Performance Goals
4	Essential Public Health Functions and Key Stakeholders	Actionable Intelligence

Key Points:

1. *Widespread Corruption:* Corruption in Guatemala's health system is extensive, affecting the public, private, and non-profit sectors.
2. *Diverse Research Methodology:* The research employs four methodologies: induction, literature review, interviews with key informants and focus groups, and the author's extensive international leadership experience.
3. *Health System Stewardship (leadership, governance):* The failure of the Ministry of Health to effectively lead and govern the health system has contributed to the spread of corruption.
4. *Essential Public Health Functions and Key Stakeholders:* The study redefines the concept of health governance and proposes six essential functions and six key actors.

Essential Takeaways:

1. *Restoring Health Stewardship:* Restoring effective leadership and governance in the entire health system is crucial for combating corruption.

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2. *Systemic Approach*: Addressing corruption requires a systemic approach that considers the health system as a whole.
3. *Performance Goals*: Achieving health system performance goals—improving health status, meeting legitimate public expectations, and ensuring financial equity—depends on combating corruption.
4. *Actionable Intelligence*: Providing actionable intelligence to the government can assist in formulating and implementing effective strategies against corruption.

When analyzing the publication ***Corruption and Health 6: A Presidential Vision for Guatemala Based on the Social Determinants of Health***, the persistent issues in Guatemalan governance are explored, and a comprehensive strategy to address them is proposed based on the concept of "integral (comprehensive) security," which includes four types of security: medical, educational, citizen, and economic. ⁽³⁴⁾ The attached table summarizes its key points and essential takeaways, followed by a detailed narrative description.

	KEY POINTS	ESSENTIAL TAKEAWAYS
1	Recurring Political Promises	Transformative Leadership
2	Culture of Corruption and Impunity	Unified National Plan
3	Electoral Influence	Inclusive Development
4	Integral (Comprehensive) Security Concept	Preventive and Protective Systems

Key Points:

1. *Recurring Political Promises*: Numerous presidential candidates make the same promises in each electoral cycle, which remain unfulfilled.
2. *Culture of Corruption and Impunity*: Guatemala is plagued by abuse of power, inefficiencies in government branches, legal fraud, and institutionalized corruption.
3. *Electoral Influence*: The population often votes based on personal, partisan, economic, or emotional reasons, contributing to the country’s persistent problems.

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4. *Integral (comprehensive) Security Concept:* The proposed national plan is based on the concept of integral security, which includes medical, educational, citizen, and economic security as pillars for development.

Essential Takeaways:

1. *Transformative Leadership:* A future-focused, shared, and service-oriented leadership is essential for meaningful change in governance.
2. *Unified National Plan:* A cohesive national plan involving the public, private, and non-profit sectors, along with international organizations, is crucial for progress.
3. *Inclusive Development:* Efforts should focus on creating an inclusive, equitable, and sustainable environment for all citizens.
4. *Preventive and Protective Systems:* Establishing systems that prevent and protect against risks and dangers is key to improving health, well-being, and prosperity for the nation.

However, the publication **Corruption and Health 5: Why is it Difficult to Accelerate the End of the HIV/AIDS Epidemic?** highlights the persistent challenges in ending the HIV/AIDS epidemic despite significant resource mobilization and scientific advancements. ⁽³⁵⁾ The attached table summarizes its key points and essential takeaways, followed by a detailed narrative description.

	KEY POINTS	ESSENTIAL TAKEAWAYS
1	Unprecedented Resources	Comprehensive Approach Needed
2	Persistent Epidemic and Role of Corruption	Transformative Recommendations
3	Ethical and Moral Decline	Persistent Inequities
4	Comprehensive Analysis and Recommendations	Critical Need for Integrity

Key Points:

1. *Unprecedented Resources:* A significant amount of global resources has been mobilized to combat the HIV/AIDS epidemic.
2. *Persistent Epidemic and Role of Corruption:* Despite resources and scientific advancements, the epidemic continues. Inefficiencies, fraud, and corruption are major barriers to ending it.

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3. *Ethical and Moral Decline*: A decline in ethical, moral, and human values is identified as a critical factor exacerbating the problem.
4. *Comprehensive Analysis and Recommendations*: The study includes a literature review, three case studies, and an analysis of the author's experiences with international agencies. It provides 18 recommendations to transform the current situation and improve efficiency and impact.

Essential Perspectives:

1. *Comprehensive Approach Needed*: A comprehensive approach is required that addresses both technical and ethical dimensions to effectively combat the HIV/AIDS epidemic.
2. *Transformative Recommendations*: The study offers a complete set of recommendations aimed at achieving greater efficiency and impact in HIV/AIDS programs.
3. *Persistent Inequities*: Without addressing underlying inequalities at individual, group, institutional, and systemic levels, significant improvements in health outcomes for poor and vulnerable populations will remain elusive.
4. *Critical Need for Integrity*: Restoring integrity and accountability in health systems is crucial to accelerating the end of the HIV/AIDS epidemic.

When delving into the publication *Corruption and Health 4: Leading the Integral Health Care System in Guatemala: The Good, The Bad, and The Ugly*, it provides perspectives on the challenges and experiences of leading the Integral Health Care System in Guatemala, highlighting achievements, obstacles, and lessons learned. ⁽³⁶⁾ The attached table summarizes its key points and essential takeaways, followed by a detailed narrative description.

	KEY POINTS	ESSENTIAL TAKEAWAYS
1	Professional Risks	Transformative Leadership Needed
2	Executive Work Experience Analysis	Integral (Holistic) Approach
3	Challenge Matrix	Systemic Barriers
4	System Failures	Importance of Ethical Standards

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Key Points:

1. *Professional Risks:* Prominent professionals often avoid government jobs due to risks such as damage to reputation, career stagnation, accusations of corruption, and personal security threats.
2. *Executive Work Experience Analysis:* The author's six-month experience leading the Integral Health Care System is examined, highlighting initiatives that improved productivity and effectiveness, as well as barriers to efficiency.
3. *Challenge Matrix:* A "good, bad, and ugly" matrix is created to describe the challenges of practicing effective executive leadership in health and addressing inefficiencies and corruption in public management.
4. *System Failures:* Failures in the public health system are attributed to a lack of vision, incompetence due to influence-based hiring, embedded corruption networks, lack of ethics and values, and indifference from officials.

Essential Takeaways:

1. *Transformative Leadership Needed:* Effective transformation of the health system requires leaders who are willing to challenge the status quo and address deeply rooted issues.
2. *Integral (Holistic) Approach:* A multifaceted approach that addresses vision, competence, ethics, and leadership is necessary to improve health system performance.
3. *Systemic Barriers:* Recognizing and addressing systemic barriers such as influence-based hiring, corruption, and indifference is crucial for meaningful change.
4. *Importance of Ethical Standards:* Maintaining high ethical standards and values is essential for combating corruption and ensuring the health system meets the needs of the population.

In the publication ***Corruption and Health 3: Developing Leadership to Transform Health Systems***, the urgent need for new leadership to address corruption and inefficiencies in health systems is described, and an educational model for developing such leaders is proposed. ⁽³⁷⁾ The attached table summarizes its key points and essential takeaways, followed by a detailed narrative description.

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	KEY POINTS	ESSENTIAL TAKEAWAYS
1	Urgent Need for Leadership Development	Transformative Education
2	Comprehensive Educational Model	Comprehensive Leadership Development
3	New Master's Program	Future-Focused, Shared, and Servant Leadership
4	Global and Local Relevance	Long-Term Commitment

Key Points:

1. *Urgent Need for Leadership Development:* New leadership is essential to transform health systems and overcome corruption, a significant barrier to global health and well-being.
2. *Comprehensive Educational Model:* The proposed curriculum integrates four critical fields of study—health intelligence, executive leadership, integrity and anti-corruption, and health economics—that are traditionally taught separately but are essential for a holistic education.
3. *New Master's Program:* A Master’s in Public Health with a focus on Leadership, Integrity, and Efficiency is proposed, with open access for any institution interested in its implementation.
4. *Global and Local Relevance:* The model is designed to address global health system challenges, with particular emphasis on countries like Guatemala.

Essential Takeaways:

1. *Transformative Education:* A transformative educational model is crucial for equipping future health leaders with the skills necessary to address systemic issues in health systems.
2. *Comprehensive Leadership Development:* Developing leaders who can integrate knowledge from multiple disciplines is essential for creating effective health systems.
3. *Future-Focused, Shared, and Servant Leadership:* Equipping leaders with visionary, collaborative, and service-oriented competencies is crucial for resolving inefficiencies and corruption in health systems and creating cultures of excellence, innovation, high performance, and accountability.
4. *Long-Term Commitment:* Successful transformation of health systems requires leaders with a lifelong commitment to combating inefficiencies and corruption.

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The publication **Corruption and Health 2: Challenges to Improving the Public Health System in Guatemala** addresses the entrenched corruption in Guatemala’s health system and explores strategies to improve its efficiency. ⁽³⁸⁾ The attached table summarizes its key points and essential takeaways, followed by a detailed narrative description.

	KEY POINTS	ESSENTIAL TAKEAWAYS
1	Deep-Rooted Corruption	Deep-Seated Problems
2	Integration of Knowledge	Holistic Reconstruction
3	Behavior and Culture	Strategic Interventions
4	Solution Matrix	Leadership and Collaboration

Key Points:

1. *Deep-Rooted Corruption:* Corruption and abuse of power have been deeply entrenched in the health system and Guatemalan society at all levels for decades.
2. *Integration of Knowledge:* The analysis incorporates academic information and real-world experiences from operational and executive levels within the Ministry of Health and Social Assistance (MSPAS), including technical cooperation and international assistance.
3. *Behavior and Culture:* Identification of areas of thought, behavior, and culture that contribute to inefficiency and corruption, with recommendations for interventions to address them.
4. *Solution Matrix:* A matrix is developed that includes three social environments, three health system approaches, and three types of leadership to address the issues.

Essential Takeaways:

1. *Deep-Seated Problems:* The public health system in Guatemala faces deeply rooted corruption and inefficiency that require significant efforts to address.
2. *Holistic Reconstruction:* A holistic approach involving personal, health system, and social reconstruction is essential for meaningful improvement.
3. *Strategic Interventions:* Specific interventions in thought, behavior, and culture are necessary to combat systemic inefficiency and corruption.

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- 4. *Leadership and Collaboration:* Effective leadership and collaboration with international organizations are critical to overcoming challenges and improving the health system.

In **Corruption and Health: Why is it Difficult to Improve Population Health?** the reader is provided with an analysis of the pervasive nature of corruption and its impact on health systems, along with recommendations based on experiences in combating corruption. ⁽³⁹⁾ The attached table summarizes its main points and essential perspectives, followed by a detailed narrative description.

	KEY POINTS	ESSENTIAL TAKEAWAYS
1	Pervasiveness of Corruption	Systemic Corruption
2	Comprehensive Approach	Individual Responsibility
3	Universal Issue	Correlation with Health Outcomes
4	Role of Individuals and Whistleblowers	Ongoing Commitment

Key Points:

- 1. *Pervasiveness of Corruption:* Corruption in its various forms—grand, petty, political, covert, and overt—permeates all levels of society and is a significant issue in the health sector.
- 2. *Comprehensive Approach:* The development includes defining the corruption problem, conducting a literature search, reviewing six work experiences, and synthesizing information to develop practical recommendations.
- 3. *Universal Issue:* No health system is perfect; all have deficiencies, but addressing corruption is crucial, especially for poor and vulnerable populations.
- 4. *Role of Individuals and Whistleblowers:* Emphasizes the importance of individuals willing to confront corruption as a lifelong commitment to making a difference in health systems.

Essential Takeaways:

- 1. *Systemic Corruption:* Corruption is deeply entrenched in health systems and society, requiring comprehensive and sustained efforts to address it.
- 2. *Individual Responsibility:* Individuals, including whistleblowers, play a crucial role in fighting corruption and improving health outcomes through consistent and dedicated actions.

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- 3. *Correlation with Health Outcomes:* Addressing corruption is essential for improving health and well-being, especially in vulnerable communities.
- 4. *Ongoing Commitment:* Combatting corruption is not a one-time effort but requires a lifelong commitment and continuous action from dedicated individuals and leaders.

In the publication **Reforming the Health Sector in Guatemala: An Organizational and Functional Model to Transform the Health System**, the author highlights the need for significant changes in Guatemala’s health sector to address various deficiencies and improve overall health outcomes. ⁽⁴⁰⁾ The goal is to develop a new model for reforming the health system, improving access and health outcomes, increasing citizen satisfaction, and protecting the population from financial risks. The attached table summarizes its main points and essential perspectives, followed by a detailed narrative description.

	KEY POINTS	ESSENTIAL TAKEAWAYS
1	Current Deficiencies	Urgent Need for Reform
2	Comparative Analysis	Learning from International Experiences
3	Reform Framework	Framework-Based Approach
4	Government Decision	Role of Government

Key Points:

- 1. *Current Deficiencies:* The health sector in Guatemala is characterized by low levels of access and coverage, high morbidity and mortality, and widespread dissatisfaction with the provision of health services.
- 2. *Comparative Analysis:* Health reforms in Latin America are analyzed to identify factors of success and failure, and these are contextualized for Guatemala.
- 3. *Reform Framework:* The Theory of the Five Control Buttons is selected as the framework to conceptualize the new organizational and functional model, focusing on changes in organization and financing.
- 4. *Government Decision:* The government elected for the 2020-2023 period must choose between strengthening the failing current model with a bureaucratic and recipient mindset or adopting a new model that functions effectively with an entrepreneurial and client-oriented mindset.

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Essential Takeaways:

1. *Urgent Need for Reform:* The current health system in Guatemala is inadequate, requiring urgent and comprehensive reform to improve health outcomes and citizen satisfaction.
2. *Learning from International Experiences:* Leveraging the experiences of other Latin American countries can provide valuable insights for reforming Guatemala's health sector.
3. *Framework-Based Approach:* Using established frameworks such as the Theory of the Five Control Buttons can help structure and guide the reform process effectively.
4. *Role of Government:* The success of the reform largely depends on the government's willingness to adopt an innovative new model based on functions, infrastructure integration, and pooled funding, and move away from the current decaying system.

Meanwhile, the publication ***The Pillars of Cost-Effectiveness: A Practical Guide for Cost-Effective Decision Making in New Health Technologies*** addresses the need for an economic approach in healthcare decision-making in Central America and the Caribbean. It proposes a practical guide to making health technology more affordable and accessible. ⁽⁴¹⁾ The attached table summarizes its key points and essential perspectives, followed by a detailed narrative description.

	KEY POINTS	ESSENTIAL TAKEAWAYS
1	<i>Limited Use of Health Economics</i>	<i>Need for an Economic Mindset</i> (pharmacoeconomics, economic evaluations, health technology assessments)
2	<i>Pillars of Cost-Effectiveness</i>	<i>Clinical, Medical Access and Economic Effectiveness</i>
3	<i>Development of a Practical Checklist</i>	<i>Practical (pharmacoeconomic) Checklists</i>
4	<i>Universal Goals</i>	<i>Collaboration among Stakeholders</i>

Key Points:

1. *Limited Use of Health Economics:* There is a limited use of health economics in healthcare decisions in Central America, the Caribbean, and most countries around the world.
2. *Pillars of Cost-Effectiveness:* This new concept is based on three types of effectiveness: clinical effectiveness, medical access effectiveness, and economic effectiveness.

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- 3. *Development of a Practical Checklist:* The research led to the creation of a practical guide using the concept of checklists to acquire new and innovative medicines in a cost-effective manner.
- 4. *Universal Goals:* The checklist aims to ensure the best quality of medicines and technologies at the lowest cost with reasonable access, and to improve partnerships and solutions in healthcare.

Essential Takeaways:

- 1. *Need for an Economic Mindset:* A cultural shift towards an economic mindset (pharmacoeconomics, economic evaluations, health technology assessments) is necessary to improve access to new health technologies. Adopting an economic mindset in healthcare is essential for making cost-effective decisions, especially in resource-limited settings.
- 2. *Clinical, Medical Access and Economic Effectiveness:* A structured approach that considers clinical, medical access, and economic effectiveness can guide better decision-making.
- 3. *Practical (Pharmacoeconomic) Checklists:* Developing and using practical guides and checklists can help ensure the affordability and accessibility of new health technologies.
- 4. *Collaboration among Stakeholders:* Collaboration among various health stakeholders is critical to achieving the universal goals of improving health outcomes and cost-effective access to technologies.

The publication **Strategic Vision for Public Health in Guatemala** presents a strategic vision to improve the performance of the Ministry of Public Health and Social Assistance (MSPAS) of Guatemala. It discusses the limitations and challenges faced by MSPAS and proposes a comprehensive solution to address these issues. ⁽⁴²⁾ The attached table summarizes its key points and essential perspectives, followed by a detailed narrative description.

	KEY POINTS	ESSENTIAL TAKEAWAYS
1	Current Challenges and Government Efforts	Systemic Problems
2	Strategic Vision	Need for Change and Transformation
3	Restructuring and Revitalization	Proven Strategic Perspectives
4	Multisectoral Approach	Collaboration and Support

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Key Points:

1. *Current Challenges and Government Efforts:* The MSPAS (Ministry of Public Health and Social Assistance) faces significant limitations, challenges, and inefficiencies, including institutionalized corruption and poor administration. Each new government attempts to transform MSPAS, but often fails due to a culture of continuity and resistance to change.
2. *Strategic Vision:* It proposes a strategic vision to improve MSPAS's performance through a comprehensive solution based on seven proven concepts and strategies.
3. *Restructuring and Revitalization:* The solution involves a Restructuring and Revitalization Program, focused on reorganizing functions, structures, programs, services, and benefits (restructuring), and developing a culture of excellence, high performance, transparency, and accountability (revitalization).
4. *Multisectoral Approach:* It emphasizes the importance of ensuring collaboration between different sectors, institutions, and organizations, the collaborative leadership of committed experts, and the combination of resources, knowledge, and skills from different fields.

Essential Takeaways:

1. *Systemic Problems:* MSPAS faces deeply entrenched systemic problems that require comprehensive and strategic solutions.
2. *Need for Change and Transformation:* The social needs of the Guatemalan population demand a transformed and different MSPAS to improve health access, coverage, and outcomes.
3. *Proven Strategic Perspectives:* Implementing proven concepts (systems thinking, three main functions and ten essential public health services, levels of disease causality, community outreach program, place-based interventions, pharmacoeconomic thinking, population health system) and comprehensive restructuring and revitalization can lead to significant improvements.
4. *Collaboration and Support:* Successful transformation depends on securing multisectoral support and fostering collaborative leadership.

Lastly, the publication **Technical Review of the Health Sector Reform Proposal in Guatemala: A Critical Analysis** presents a critical assessment of a proposed health sector reform in Guatemala. It highlights various aspects of the proposal and identifies shortcomings and challenges. ⁽⁴³⁾ The attached table summarizes its key points and essential perspectives, followed by a detailed narrative description.

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	KEY POINTS	ESSENTIAL TAKEAWAYS
1	Commendable Effort	Critical Moment
2	Gaps in Health Services	Holistic Reform Approach
3	Lack of real changes and inadequate crisis resolution	Achievable Goals
4	Lack of integration and insufficient implementation of innovations	Sustained Commitment

Key Points:

1. *Commendable Effort:* The reform proposal aims to address the current situation and challenges in Guatemala's health sector.
2. *Gaps in Health Services:* It focuses on gaps in access to health services, legal and public health principles, alignment with the National Development Plan, innovation strategies, and strengthening the leadership role of the Ministry of Public Health and Social Assistance.
3. *Identified Shortcomings 1:* The critical analysis reveals that the reform proposal has deficiencies in several areas:
 - o Lack of real changes and the creation of a comprehensive, integrated, effective, and efficient population health system.
 - o Inadequate resolution of the current health crisis.
4. *Identified Shortcomings 2:* The critical analysis reveals that the reform proposal has deficiencies in several areas:
 - o Insufficient implementation of innovations and structural changes to improve the health system's performance.
 - o Lack of integration among different health actors who, while complementary, do not collaborate effectively.

Essential Takeaways:

1. *Critical Moment:* Guatemala's health sector is at a critical juncture that requires immediate and substantial reforms to avoid failure.

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2. *Holistic Reform Approach*: Effective reform efforts must address multiple dimensions of the health system, including technical, managerial, financial, political, and structural aspects.
3. *Achievable Goals*: Setting realistic goals and expectations is essential to ensure that reforms lead to tangible improvements in access, coverage, and health outcomes.
4. *Sustained Commitment*: Achieving sustainable reform in the health sector requires ongoing commitment, leadership, and collaboration among stakeholders.

IV. DISCUSSION OF RESULTS

Various institutions and researchers have studied the topic of building resilient health systems and have contributed valuable definitions, descriptions, and experiences on the subject. These references provide a solid foundation for understanding and analyzing resilient health systems from diverse perspectives, understanding current approaches and best practices in strengthening these systems, and effectively communicating what a resilient health system is and how it can be built and maintained.

According to the World Health Organization (WHO), a resilient health system can maintain its essential functions during crises and enhancing its capacity to respond to future adverse events. ⁽¹⁾ The World Bank defines a resilient health system as one that can absorb, adapt, and transform in the face of shocks and stresses. ⁽²⁾ Kruk et al. note that resilience in health systems involves the continuous capacity to learn and adapt to manage crises like the Ebola outbreak. ⁽³⁾ Blanchet et al. propose a conceptual framework for the governance and management capacity of resilience in health systems. ⁽⁴⁾ Thomas et al. emphasize the importance of key strategies and fundamental concepts for strengthening the resilience of health systems. ⁽¹⁰⁾

The construction and maintenance of resilient health systems involve adopting a comprehensive approach that encompasses several key aspects. Among the main recommendations and strategies supported by the literature are strengthening governance and leadership, ⁽⁴⁴⁾ investing in health infrastructure, ⁽⁴⁵⁾ developing the workforce, ⁽⁴⁶⁾ enhancing health information systems, ⁽⁴⁷⁾ ensuring adequate and sustainable financing, ⁽⁴⁸⁾ and promoting community participation. ⁽⁴⁹⁾ These strategies, correlated with the findings of this publication detailed below, provide a comprehensive framework for developing resilient health systems capable of effectively and equitably facing and recovering from crises.

The meaning, importance, benefits, and utility of the 44 Key Points identified and extracted from the publications referenced in Section III: Comprehensive Synthesis of Results can be summarized as follows:

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The analysis of efforts to strengthen health systems, particularly in the context of corruption, reveals a landscape where unprecedented resources often clash with persistent epidemics and systemic failures. Despite recurring political promises, entrenched corruption remains a formidable barrier, further exacerbated by electoral influences and a culture of moral and ethical decline. A comprehensive (integral) security concept and proven methodologies are essential for effective health governance, requiring the involvement of all stakeholders to address professional risks and systemic challenges.

The development of leadership and a comprehensive (integral) educational model are urgently needed, as exemplified by initiatives like a new master's program with both global and local relevance. Integrating knowledge, behavior, and cultural changes is critical to overcoming the pervasive nature of corruption and impunity. A matrix of solutions that emphasizes the development of practical guidelines and cost-effectiveness is vital for reform.

The role of individuals, along with governmental decisions and efforts, forms the backbone of a strategic vision aimed at restructuring and revitalizing health systems. Despite commendable efforts, significant gaps in health services and the lack of real changes underscore the need for a more holistic approach to truly achieve universal health goals and address current deficiencies.

On the other hand, the meaning, importance, benefits, and utility of the 44 Essential Takeaways identified and extracted from the publications referenced in Section III: Comprehensive Synthesis of Results can be summarized as follows:

A holistic approach is essential for strengthening health systems, addressing deeply rooted issues such as corruption and persistent inequalities. A future-focused, shared, and servant leadership, along with transformative interventions, are needed to restore integrity and establish unified national plans for inclusive development. Preventive and protective measures, combined with systemic approaches and performance objectives, foster actionable intelligence and effective interventions.

Ethical standards and transformative education are vital for developing comprehensive leadership with both global and local relevance. Addressing systemic corruption requires a framework-based approach that emphasizes the role of government and the need for an economic mindset. Collaboration among stakeholders and learning from international experiences enhance strategic vision and support.

Practical checklists or verification tools and the pillars of cost-effectiveness are crucial for achieving sustained commitment and transformative change. Recognizing the correlation between health outcomes and systemic issues underscores the importance of ongoing commitment and urgent reform. Strategic interventions and achievable goals within a holistic reform approach ensure long-term improvements and resilience in health systems.

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V. CONCLUSIONS

Building a resilient health system is a multifaceted process that requires strengthening infrastructure, capacities, and key processes. However, the system's resilience is intrinsically linked to its ability to address corruption. A health system undermined by corruption becomes ineffective and less capable of adapting to crises, thus weakening its recovery capacity in the face of adversities such as epidemics or natural disasters.

The eleven reviewed publications on health systems emphasize that corruption and systemic inefficiencies are critical barriers to achieving the desired resilience in health systems. Through data analysis and pattern identification, practical approaches are proposed, including improving governance, comprehensive education of health leaders, and multisectoral collaboration. These strategies are essential not only for enhancing crisis response capabilities but also for ensuring the long-term sustainability of the system.

Combating corruption is crucial for restoring public trust and creating a more ethical and transparent environment. Transparency, accountability, and integrity are fundamental pillars to ensure that resources are used effectively, allowing the system to face unforeseen challenges more robustly and equitably. In summary, the resilience of a health system depends both on its structural strength and its commitment to transparency and justice.

CONFLICTS OF INTEREST

No conflicts of interest are declared.

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Name of the author(s):

- **Mario Ricardo Calderón Pinzón**

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