

Collaborative Governance Strategies for the Adoption of Medical Innovations: A Comparative Analysis of HoLEP vs. TURP, Viktor Frankl vs. Carl Jung, and LASIK vs. PRK within Health Consortia in São Paulo Capital and Palmeira das Missões, Brazil

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Abstract: The study therefore offers a practical governance pathway through which health-sector consortia can support multidisciplinary thematic groups, knowledge-sharing mechanisms, communities of practice, links with research and reference centers, continuing education, evidence synthesis, and structured dialogue with society. In this way, the “Now There Are Specialists” Program can move beyond the mere availability of specialists toward an institutional capacity to connect patients with the appropriate expertise and procedures. The study consequently proposes that multidisciplinary medical knowledge and management knowledge should not compete for authority; instead, they should perform complementary functions within a collaborative-governance structure oriented toward the needs of the target population.

The study argues that improving the “Now There Are Specialists” Program requires more than increasing the supply of specialists. It requires institutional knowledge capacity capable of connecting medical expertise with governance knowledge and knowledge derived from society. The central finding is that political or purely administrative coordination among consortia is insufficient when the complexity of multidisciplinary medicine is not adequately recognized. A more structured model should enable governance arrangements to draw systematically on medical expertise, understand the difficulties patients face when seeking appropriate care, and transform distributed knowledge into strategy, planning, management, education, and service delivery.

The findings support the Culture–Knowledge–Intelligence (CKI) model developed in this research. The model explains how organizational culture can create conditions for knowledge creation and sharing, how Knowledge Management can organize dispersed expertise, and how intelligence can transform knowledge into strategy, planning, management, and implementation. Health-sector consortia can therefore operate as institutional interfaces linking the three levels of government, medical expertise, and society. Their role is not to determine clinical procedures, but to create the conditions under which relevant knowledge can be heard, compared, coordinated, and incorporated into public policy.

The central analytical logic developed by the research is: Medical knowledge → Knowledge integration → Governance capacity → Strategy → Planning → Management → Appropriate specialist/procedure → Public target. Medical knowledge establishes what is clinically possible and professionally appropriate; knowledge integration connects evidence, specialized expertise, technologies, procedures, and contextual information; governance capacity organizes this knowledge across institutions and governmental levels; strategy, planning, and management transform it into coordinated action; and the final objective is to connect the appropriate specialist and procedure with the population that needs them.

The methodology is grounded in the collaborative-governance literature. Interviews with Consortium leaders are connected to a comparative analysis of three medical fields: urology, ophthalmology, and psychiatry. The three fields are methodological cases rather than a claim that the “Now There Are Specialists” Program should be restricted to these specialties. Their purpose is to demonstrate, through different configurations of specialized knowledge, how difficult it can be for society and public administration to identify the appropriate knowledge and procedure before identifying the professional who can provide it. The comparisons of HoLEP and TURP, LASIK and PRK, and the epistemological contributions of Jung, Frankl, and Husserl therefore function as evidence of a broader problem of knowledge fragmentation and integration.

The empirical component focuses on leaders of health-sector consortia rather than physicians. This distinction is fundamental because consortia are institutional arrangements designed to organize relationships among municipalities, states, and the Federal Government. Consortium leaders possess administrative, territorial, organizational, and intergovernmental knowledge, while physicians possess specialized medical knowledge. The study does not expect managers to become medical specialists or to replace clinical decision-making. Instead, it examines how governance can listen to medical expertise, incorporate social participation and social control,

and organize different forms of knowledge so that the Program can reach its target population more appropriately.

This study examines the question: To what extent does multidisciplinary collaboration among medical fields improve the “Now There Are Specialists” Program in Brazil, considering the role of Health Sector Consortia among the three levels of government? The research proceeds from the premise that expanding the number of specialists is necessary but does not, by itself, resolve the knowledge problem underlying specialized healthcare. Before the State can provide access to the appropriate specialist, it must have sufficient institutional capacity to understand which forms of specialized knowledge, procedures, and professional expertise are required for particular population and healthcare needs.

Keywords: Health Consortia; Collaborative Governance; Knowledge Management; Interdisciplinary Healthcare; Public Health Management; Specialized Healthcare; São Paulo; Rio Grande do Sul.

I. Introduction

The “Now There Are Specialists” Program, established by Federal Brazilian Law No. 15.233/2025, was introduced to expand access to specialist healthcare within Brazil’s Unified Health System (SUS) and reduce waiting times for consultations, diagnostic examinations, and elective procedures. The initiative represents an important step toward strengthening the coordination of healthcare services through greater collaboration among the federal government, states, municipalities, and public health consortia. Public health consortia have become strategic governance mechanisms for organizing regional healthcare networks, pooling financial and technical resources, and increasing access to specialized services. Despite these advances, previous studies have identified persistent challenges related to intergovernmental coordination, institutional capacity, policy integration, and organizational management. These limitations may reduce the effectiveness of public policies and, when governance mechanisms are weak, increase vulnerability to inefficiency and misuse of public resources. Recent investigations into public administration and healthcare governance have highlighted the importance of transparency, accountability, and robust management systems to improve institutional performance.

In response to these challenges, many health consortia have adopted management support structures, such as the Management Support Centers (NAGs), which provide technical assistance to member municipalities, strengthen administrative capacity, and facilitate the implementation of regional healthcare policies. The “Now There Are Specialists” Program further expands this collaborative model by relying on health consortia as key partners in coordinating specialist services across different regions of Brazil.

From the patient’s perspective, a major challenge is navigating the choice among multiple evidence-based clinical alternatives. This decision requires not only medical expertise but also effective organizational processes capable of disseminating, integrating, and applying clinical knowledge. Consequently, health consortia must develop management systems that support evidence-based decision-making and interdisciplinary collaboration.

This study uses three medical and theoretical fields—urology (HoLEP versus TURP), ophthalmology (LASIK versus PRK), and psychiatry/psychology (Carl Jung and Viktor Frankl)—as illustrative cases for analyzing how specialized knowledge can be translated into organizational practice. Rather than comparing the clinical effectiveness of these approaches, the research examines how knowledge generated in different medical specialties can inform governance, strategic planning, and management within public health consortia. Accordingly, the research addresses the following question:

To what extent does interdisciplinary medical knowledge influence strategy, planning, and management practices within Brazilian public health consortia participating in the “Now There Are Specialists” Program?

Given the program’s recent implementation and the limited academic literature on its organizational effects, this study contributes to knowledge-management and collaborative-governance debates by proposing a framework for integrating specialized medical knowledge into public healthcare administration.

1. A Brief History of the “Now There Are Specialists”

Law No. 15.233/2025 resulted from the conversion of Provisional Measure No. 1.301/2025 and established the “Now There Are Specialists” Program, in addition to providing for the Conceição Hospital Group SA. This legislation reinforces the organization of specialized care within the Unified Health System (SUS), highlighting the strategic role of the Conceição Hospital Group, which concentrates an important healthcare structure in Rio Grande do Sul, especially in Porto Alegre, while simultaneously seeking to expand the decentralization of services to other regions of the state, such as Pelotas. The law establishes the following principal objectives: I – to qualify and diversify the health actions and services intended for the population; II – to expand the supply of hospital beds and other health services necessary for the care of the population; and III – to reduce waiting times for consultations, procedures, examinations, and other specialized healthcare actions and services. Article 15, item IX, of the legislation stipulates that the “Now There Are Specialists” Program must promote the dissemination of the results of scientific studies in the health field in specialized journals,

strengthening the production and dissemination of technical and scientific knowledge. Article 17, item IV, establishes that the Ministry of Health may, through indirect administration entities and in emergency situations, contract specialized care services, observing the norms and regulations of the SUS (Unified Health System). However, one of the main historical challenges of the SUS is related to the administrative and operational complexity of its management. According to the Director of CONSIM, Palmeira das Missões, Rio Grande do Sul, Brazil, the norms of public consortia and the management processes of the SUS present a high degree of complexity and bureaucracy. This difficulty is aggravated by the tripartite financing model, in which resources are distributed between the Union (50%), states (25%), and municipalities (25%), as pointed out by De Angelis (2026). In this context, the Brazilian Agency for Support to the Management of the SUS (AgSUS) assumes a strategic and complementary role in the execution of the “Now There Are Specialists” Program, an initiative of the Ministry of Health aimed at expanding the population’s access to specialized services within the SUS. The main objective of the “Now There Are Specialists” Program is to reduce waiting times for consultations, exams, treatments, and elective surgeries, strengthening specialized care throughout the national territory, especially in historically underserved regions. AgSUS participates through two principal modes of action: contracting healthcare service providers to work in public and philanthropic hospitals with installed capacity and the potential to expand services; and accrediting private companies, whether for-profit or non-profit, that are interested in providing healthcare through Mobile Specialized Healthcare Units. With the goal of addressing the fragmentation of initiatives and reducing rework among different public organizations involved in specialized care, the Ministry of Health, under the leadership of Minister Alexandre Padilha, launched a call for applications for the hiring and training of specialist physicians, offering 635 positions in 2025. One of the initiative’s distinguishing features was the integration of specialized training with clinical practice in public hospitals and polyclinics. The 16 advanced training courses were conducted by leading professionals linked to institutions participating in the Program to Support the Institutional Development of the Unified Health System (PROADI-SUS) and the Ebserh Network.

The training lasted 12 months, with 16 hours per week dedicated to clinical practice and four hours per week to educational activities, including remote mentoring and immersion in reference services in priority areas for the SUS, such as oncology and gynecology. In this way, the “Now There Are Specialists” Program can be understood as a strategy for integrating management, professional training, expanded care capacity, and improvements in specialized care, with the objective of addressing historical bottlenecks in the SUS and promoting greater equity in access to health services. However, the overlap among public bodies, the limited integration between AgSUS and health consortia, and the selection of only a small number of specialties for short-term training courses may weaken the rationale underlying the creation of health consortia and their practical role within the SUS. These issues are examined in the literature review and, especially, in the interviews, which provide support for the Culture–Knowledge–Intelligence model and its application to thematic groups, remote mentoring, immersion in reference services, and other knowledge-sharing mechanisms within a collaborative-governance process.

Accordingly, the “Now There Are Specialists” Program can be strengthened when health-sector consortia are treated not merely as administrative partners in the distribution of specialists, but as organizational spaces for knowledge integration. Such a role would not interfere with medical autonomy. On the contrary, it would strengthen the conditions under which physicians can perform their role, because governance would be better prepared to identify needs, organize services, support evidence-based decisions, and connect the right professional with the right population at the right stage of care.

This distinction is essential to the research question and to the interpretation of the three medical cases. HoLEP is not selected merely because evidence favors it over TURP on several outcomes; it demonstrates the need to integrate comparative evidence with clinical expertise and patient circumstances. LASIK is not selected because it is universally superior to PRK; the literature demonstrates precisely the opposite—that both may be appropriate under different conditions. Jung, Frankl, and Husserl are not presented as competing clinical prescriptions; their comparison demonstrates how a field may require the integration of different epistemological perspectives to understand the person and the meaning of illness. In each case, the governance problem is the same: specialized knowledge must be made accessible, interpretable, and usable without being reduced to a bureaucratic formula.

The contribution to the “Now There Are Specialists” Program is therefore not simply to recommend “more interdisciplinarity.” It is to propose an institutional mechanism through which multidisciplinary knowledge can become operational. The CKI model, supported by thematic groups, communities of practice, remote mentoring, immersion in reference services, evidence synthesis, and structured dialogue among managers, professionals, researchers, and society, can provide such a mechanism. This would allow the Program to move from the question “Where are the specialists?” toward the prior and more difficult question “What knowledge and procedure does this population need, and how can the health system reliably connect that need to the appropriate specialist?”

The comparative findings from HoLEP versus TURP, LASIK versus PRK, and Jung, Frankl, and Hüsserl consequently become evidence for the CKI model rather than independent medical conclusions. The medical studies demonstrate the diversity, specialization, uncertainty, and contextual character of knowledge. The interviews with Consortium leaders demonstrate the governance conditions under which knowledge can be shared and applied. Their intersection supports the proposition that culture must create conditions for learning and openness; knowledge must be organized and shared; and intelligence must transform that knowledge into strategy, planning, management, and action.

The resulting framework is therefore a three-way knowledge interface: medical professionals provide specialized clinical knowledge; society provides the needs, experiences, priorities, and public purpose that give the policy its direction; and governance connects these dimensions with resources, institutions, strategy, planning, management, education, and evaluation. Health Sector Consortia are potentially important because they are positioned between the three levels of government and can institutionalize this connection across territorial boundaries.

This argument also explains why social participation and social control are essential. If Consortia become primarily instruments for political negotiation, the institutional process may privilege the distribution of resources or positions without sufficiently examining whether the knowledge behind those decisions corresponds to the needs of the population. Social participation can help make those needs visible, while social control can contribute to accountability concerning how decisions are justified, implemented, and evaluated.

For Health Sector Consortia, this implies a change in the meaning of management capacity. Managers do not need to become urologists, ophthalmologists, psychiatrists, or specialists in every other field. They need institutional intelligence to know when a problem requires specialized knowledge, how to access reliable evidence, how to bring the relevant professionals into collaborative processes, how to connect this knowledge to territorial planning, and how to maintain society's needs and priorities at the center of the process.

This is why the criticism developed in this research is directed neither against physicians nor against administrative managers. It is directed toward the assumption that increasing specialist availability is sufficient to resolve the knowledge problem of specialized healthcare. The "Now There Are Specialists" Program can be strengthened when its supply-side objective is connected to a knowledge-integration structure capable of helping governance understand the alternatives that exist before resources are committed to particular services and professionals.

The purpose of the comparative medical analysis is therefore to make visible what administrative structures can easily overlook: before society can receive "an expert," the health system must determine what kind of expertise is required. Even within one specialty, the appropriate intervention may depend on evidence, patient characteristics, technological resources, professional competence, values, and the patient's lived experience. The difficulty is multiplied when the policy must operate across many specialties and territories.

The three medical fields selected in this study should be understood precisely in this way. Their selection does not claim that urology, ophthalmology, and psychiatry are the only fields relevant to the "Now There Are Specialists" Program. Nor does the study seek to prescribe a single procedure or theory for all patients. They were selected because they expose different forms of knowledge integration. The urological comparison demonstrates a situation in which the evidence increasingly favors HoLEP over TURP for several outcomes, while still requiring experienced surgical expertise and patient-specific judgment. The ophthalmological comparison demonstrates that LASIK and PRK can both be effective while differing according to patient characteristics, corneal conditions, risks, recovery, and expectations. The psychiatric comparison demonstrates that the relevant knowledge may extend beyond a purely procedural choice into different ways of understanding experience, selfhood, meaning, and suffering.

Consequently, the sequence relevant to this research is not simply "more experts" followed by service delivery. It is: population need; identification of the relevant clinical problem; access to appropriate multidisciplinary knowledge; evaluation of evidence and alternatives; clinical decision by the qualified professional; and delivery, monitoring, and learning within the health system. The Health Sector Consortium can contribute to the institutional conditions surrounding this sequence without replacing the physician at the point of clinical decision.

The problem becomes even clearer when the patient perspective is considered. Society generally does not possess the specialized knowledge necessary to determine whether a patient requires TURP or HoLEP, LASIK or PRK, or which conceptual and therapeutic approach is most appropriate in a complex psychiatric situation. Society should not be expected to perform the physician's clinical function. Yet society is precisely the target population for whom the health system must organize access to care. Governance therefore has a different responsibility: it must create conditions under which the population can enter a system capable of directing its needs toward appropriate specialized knowledge.

This is not presented as a model that Brazilian health-sector consortia should simply replicate. Its relevance is conceptual. It demonstrates that the passage from scientific knowledge to healthcare delivery

requires an institutional intermediary capable of synthesis, evaluation, translation, and communication. The same logic can be adapted to the Brazilian territorial context, in which municipalities, states, and the Federal Government must coordinate specialized care while responding to regional differences in resources, demand, professional capacity, and population needs.

The Mayo Clinic provides a useful institutional illustration of this principle. Its Knowledge Synthesis Program describes knowledge synthesis as a critical first step in knowledge translation: identifying evidence, assessing its value, and combining it into summaries that can inform best practice. The program conducts systematic reviews, meta-analyses, network meta-analyses, qualitative synthesis, and clinical practice guideline work, while also identifying gaps in knowledge and implementation. It supports not only clinical practice but also governmental entities and professional societies in developing guidelines. The Mayo Clinic model therefore demonstrates that sophisticated healthcare systems require institutional mechanisms dedicated to connecting dispersed evidence with decisions.

The implication for the “Now There Are Specialists” Program is significant. Knowledge cannot be treated as something that automatically reaches practice because a specialist, a scientific article, or a health service exists. Knowledge must be identified, assessed, synthesized, communicated, interpreted in context, and connected to decisions. Kitson and Harvey (2016), through the i-PARIHS framework, emphasize facilitation as an important element in implementing new knowledge in clinical practice. Evidence-informed healthcare therefore depends not only on producing evidence, but also on organizational conditions that allow evidence to be adopted and adapted in real settings.

This distinction is central to contemporary knowledge-translation research. Wathen et al. (2015) describe integrated knowledge translation as a partnership between researchers and knowledge users intended to reduce the disconnect between the production of evidence and decisions in policy and practice. Chen et al. (2017) similarly argue that evidence-based healthcare remains fragmented when concepts and instruments are not integrated into clinical practice, emphasizing systematic reviews, updated evidence, and shared decision-making as mechanisms for reducing the research-to-practice gap. Lang and Johnson (2012) likewise frame knowledge translation as an effort to address the disconnection between evidence-based clinical care and real-world practice.

The current design of the Program already recognizes important dimensions of this problem. The Ministry of Health describes Mais Médicos Especialistas as combining specialist activity with theoretical and practical activities, including mentoring and immersion in centers of excellence. The first cycle included 1,700 positions, with 635 immediate openings, while residency incentives were also designed to expand specialist training in priority areas. This is an important movement toward integrating professional formation and service delivery. Nevertheless, specialist availability and knowledge integration are not identical problems. A system may increase the number of specialists while still leaving unresolved the institutional question of how the population, managers, and services identify which expertise is required and how current evidence should inform that choice.

The “Now There Are Specialists” Program should be examined not only as a policy for increasing the availability of specialists, but also as a policy for organizing the knowledge infrastructure that makes specialized care possible. This distinction returns the analysis to the research question: To what extent does multidisciplinary medical knowledge improve the “Now There Are Specialists” Program in Brazil when Health Sector Consortia operate among the three levels of government? The question is not whether the Program should have more physicians. It is whether the institutional system can help society reach the appropriate knowledge, procedure, and professional when the problem presented by the patient is complex.

II. Knowledge Integration as the Missing Link between Specialized Expertise and the “Now There Are Specialists” Program

2. Literature Review Across Three Medical and Theoretical Fields

2.1. Comparative Study of Holmium Laser Enucleation of the Prostate (HoLEP) and Transurethral Resection of the Prostate (TURP): Clinical Outcomes and the Phenomenology of the Lived Body

Benign prostatic hyperplasia (BPH) is not merely an anatomical condition; it can affect urinary function, sexual health, sleep, daily activities, and overall quality of life. Transurethral resection of the prostate (TURP) has historically been a standard surgical treatment for obstructive BPH, whereas holmium laser enucleation of the prostate (HoLEP) uses a holmium laser to enucleate adenomatous tissue without external incision. HoLEP provides rapid symptom relief, enables pathological examination of the removed tissue, and is associated with favorable recovery (MFMER, 2024). A major advantage is the more complete removal of prostatic tissue. Enucleation techniques retrieve a greater proportion of adenomatous tissue than conventional TURP, potentially contributing to greater durability and lower recurrence rates (Magistro et al., 2021).

Comparative evidence increasingly indicates that HoLEP provides functional outcomes that are at least equivalent, and often superior, to TURP, while reducing catheterization and hospital stay. A meta-analysis of 28

randomized controlled trials involving 3,085 patients found lower transfusion and reoperation rates with endoscopic enucleation than with TURP (Vo et al., 2025). HoLEP also has a favorable hemostatic profile and is generally associated with less bleeding and fewer transfusion requirements (Chen et al., 2023; Li et al., 2014; Westhofen et al., 2021; John et al., 2021; Lee et al., 2023). Perioperative management may nevertheless influence TURP outcomes; for example, tranexamic acid administered through irrigation has been associated with reduced postoperative bleeding, particularly with cold irrigation (Salehi et al., 2025). Similarly, lidocaine-releasing Foley catheters may modestly reduce postoperative urethral pain and analgesic requirements without increasing complications (Han et al., 2026).

The postoperative complication profile also appears to favor HoLEP. Bladder neck contracture has been reported more frequently after TURP than HoLEP (9.4% vs. 5.7%), while early postoperative urinary incontinence is also more common after TURP (Hu et al., 2025). Nevertheless, HoLEP remains technically demanding and dependent on surgical expertise. Expert assessment of apical mucosal preservation has demonstrated limited agreement and predictive value for postoperative incontinence, suggesting that individual technical markers should not be regarded as definitive predictors of recovery (Khandekar et al., 2025). Sexual outcomes are also clinically relevant, with comparative laser-enucleation evidence suggesting lower rates of retrograde ejaculation and improved IIEF-5 scores compared with TURP (Liu, Wang, & Xi, 2026). Importantly, not all cited evidence directly compares HoLEP with TURP; studies such as Hsu et al. (2024), which evaluated laparoscopic versus open hernia repair, should therefore be regarded only as contextual evidence regarding minimally invasive surgery. Overall, the strongest comparative evidence supports HoLEP in terms of bleeding, transfusion, reoperation, hospitalization, and functional recovery (Vo et al., 2025; Goueli et al., 2026). When performed by an experienced surgeon, HoLEP represents a safe, effective, and durable alternative to TURP (Goueli et al., 2026; Vo et al., 2025).

Phenomenological Interpretation: From Husserl to Merleau-Ponty

The clinical comparison becomes more meaningful when BPH is examined through a phenomenological perspective. Objective measures such as prostate volume, urinary flow, bleeding, continence, and reoperation rates cannot fully capture what it means to live with urinary obstruction. Nocturia disrupts the experience of time and sleep; urgency and incontinence may affect self-esteem; urinary limitations can restrict mobility and social participation; and sexual dysfunction may alter intimate relationships. The patient's body is therefore not simply an anatomical object but the medium through which everyday experience is constituted (Girman et al., 1995; Merleau-Ponty, 2012).

Husserl's distinction between the physical body (Körper) and the lived body (Leib) provides a philosophical foundation for understanding illness from the patient's first-person perspective. Merleau-Ponty extends this account by emphasizing the inseparability of embodiment, perception, action, and the world. This represents a key distinction between their approaches: while Husserl establishes the significance of lived embodiment, Merleau-Ponty develops a more comprehensive account of how the body constitutes the individual's practical relationship with the world (Halák, 2016; Halák, 2021).

This distinction is particularly relevant to BPH because anatomical severity does not necessarily correspond to subjective symptom burden (Girman et al., 1995; Merleau-Ponty, 2012). Consequently, surgical success should not be assessed solely by the amount of prostatic tissue removed. Its significance also lies in restoring the patient's ability to sleep, move freely, urinate without restriction, participate socially, and maintain intimate relationships.

Thus, the comparison between TURP and HoLEP yields both a clinical and phenomenological conclusion. Clinically, HoLEP increasingly demonstrates advantages in durability, bleeding, transfusion requirements, reoperation, catheterization, hospitalization, and functional recovery (Vo et al., 2025; Goueli et al., 2026). Phenomenologically, these benefits extend beyond physiological improvement: successful treatment may restore the patient's relationship with their body and everyday world. Husserl provides the foundation for understanding the lived body, while Merleau-Ponty develops embodiment as a broader condition of human existence (Halák, 2016; Halák, 2021). HoLEP may therefore be understood not only as an effective surgical alternative to TURP, but also as an intervention capable of restoring bodily autonomy, everyday agency, and quality of life.

2.2. A Comparative Study of LASIK and PRK

According to Al-Shehri, Aljohani, and Al-Mahmood (2026), both femtosecond-assisted laser in situ keratomileusis (LASIK) and photorefractive keratectomy (PRK) provided excellent visual and refractive outcomes with low complication rates at one year, demonstrating that both are safe, effective, and predictable treatments for hyperopia.

However, the article "Corneal endothelial damage after simultaneous PRK and corneal cross-linking in stable keratoconus" highlights the risk of severe postoperative inflammation after combined procedures in keratoconus. Conventional corneal cross-linking - CXL alone followed by delayed transepithelial PRK after

corneal stabilization may be a safer approach for visual improvement. Careful selection of treatment parameters is essential in refractive surgery (Serrao & Lombardo, 2019).

Keratoconus is the most common corneal ectatic disorder, characterized by progressive corneal thinning and protrusion causing visual impairment, with a multifactorial etiology involving genetic and environmental factors (Cheung, McGhee & Sherwin, 2011; Gordon-Shaag et al., 2015).

In patients who had previous myopic LASIK or PRK and later underwent cataract surgery, intraocular lens (IOL) power prediction became less accurate as the angle kappa increased when corneal vertex-centered keratometry was used. For patients with an angle kappa of ≥ 0.4 mm, pupil-centered keratometry provided more accurate IOL power calculations and reduced prediction errors (Yang et al., 2025).

This topic has several ramifications and remains an active area of comparative research, presenting multidisciplinary challenges for scholars seeking to understand the relevant trade-offs.

By integrating images from a prototype laser Doppler holography (LDH) system with optical coherence tomography (OCT), Barre et al. (2026) visualized the three-dimensional architecture of the choroidal arterial network, from its origin in the ciliary arteries to the precapillary arterioles.

Gao et al. (2026) reported significant microvascular abnormalities in the clinically unaffected contralateral eyes of patients with central retinal artery occlusion (CRAO), suggesting that CRAO may reflect bilateral retinal vascular disease rather than a unilateral event. They also found that reduced superficial capillary plexus vessel density was associated with thinner central retinal thickness, indicating a close relationship between retinal structural changes and impaired microvascular perfusion (Gao et al., 2026).

As a broader procedural illustration, research on techniques for entering and exiting the radial artery shows that effective radial-access technique is essential for procedural success, while appropriate radial hemostasis can minimize the risk of radial-artery occlusion and preserve the artery for future transradial access (Gilchrist, FACC & FSCAI, 2014).

In the article “Comparison of Single vs Double Wall Puncture Techniques in Ultrasound-Guided Radial Access for Coronary Arteriogram: Insights from the (Radial Artery Access with Ultrasound Trial) RAUST Trial”, Odeleye, Gautam and Bista (2026) found that in the ultrasound-guided cohort, both techniques demonstrated comparable clinical outcomes. Further prospective randomized studies are warranted to better assess complication rates and identify the optimal access strategy across a range of clinical settings.

Despite advances in technology and technique, complications remain possible. Arterial spasm, the most common complication, can cause severe pain and procedural failure. Its incidence is influenced by factors such as operator experience, radial artery size, and equipment used. Routine administration of an antispasmodic cocktail, typically including the nitric oxide donor glyceryl trinitrate, helps reduce the risk of spasm (Coghill et al., 2020).

Against this broader background of procedure-specific complications, a direct comparison between LASIK and PRK remains important.

A retrospective study compared two-year outcomes of femtosecond LASIK and PRK for the correction of astigmatism greater than 2.0 D. Both procedures significantly improved vision and reduced astigmatism; however, femto-LASIK provided better long-term astigmatic correction, lower residual astigmatism, and superior uncorrected distance visual acuity. Corrected visual acuity improvement was similar between the two techniques. Femto-LASIK showed particular advantages in patients with high astigmatism, with less regression over time (Miraftab, Hashemi & Asgari, 2017).

A more detailed study examined outcomes at different intervals after PRK and LASIK, focusing on dry-eye disease (DED), visual disturbances, and ocular pain, and found that:

DED was the most common complication, occurring at similar overall rates after both procedures, although PRK showed a higher incidence during the 1–3 month period. PRK was also associated with more early postoperative visual disturbances, while ocular pain was uncommon in both groups and slightly lower after LASIK during long-term follow-up. Overall, complication patterns differed mainly during specific stages of recovery, highlighting the importance of procedure-specific counseling and follow-up after refractive surgery (Kang et al., 2026).

In a large-scale study with 778 patients Zhang (2026) discovered that postoperative dry eye occurred in 41.4% of patients following refractive surgery. Surface ablation procedures were associated with a higher risk of dry eye compared with lamellar techniques, emphasizing the importance of thorough tear film evaluation for patient selection, risk assessment, and surgical planning.

Overall, the current evidence indicates that refractive surgery has evolved into a highly successful field, but optimal outcomes require a balance between technological capability and individualized clinical decision-making. LASIK and PRK are both effective procedures, yet their benefits and risks differ depending on patient characteristics, corneal condition, refractive error, and expectations. Future research should continue to focus on improving predictive accuracy, reducing postoperative complications, and developing personalized treatment algorithms.

In conclusion, the comparison between LASIK and PRK remains an active area of investigation because no single procedure is universally superior. Instead, the best surgical approach depends on a comprehensive evaluation of corneal health, ocular surface status, refractive requirements, and long-term visual goals. A multidisciplinary perspective integrating corneal imaging, vascular assessment, surgical innovation, and evidence-based patient management will be essential for maximizing safety and achieving stable visual outcomes in the future of refractive and ophthalmic surgery.

2.3. A Comparative Study of Carl Jung and Viktor Frankl in Dialogue with Edmund Husserl

The central theoretical proposition is that spiritual growth occurs when lived experience becomes consciously understood, unconscious aspects of the personality become progressively integrated around the Self, and this greater integration is translated into authentic relationships, creativity, courage, responsibility and meaning.

THE INTEGRATED MODEL

EXPERIENCE → UNDERSTANDING → SELF-INTEGRATION → AUTHENTIC VALUES → MEANINGFUL ACTION → SPIRITUAL GROWTH

Those who are “bound to their appetites cannot grasp the clear light.” Jung’s discussion of the “clear light” points to a state of consciousness that is no longer completely governed by immediate desires and their external gratification. Desires can bind the individual to the conscious world, whereas a certain withdrawal from external demands may create the psychological space necessary to encounter previously unconscious contents. Jung nevertheless recognizes that withdrawal can become problematic when it develops into repression or neglect. In the Hindu tradition, yoga provides an important example of this movement beyond ordinary desire, representing a state that Western psychology might describe as unconscious but that Hindu thought understands as a higher degree of consciousness (Jung, 2023).

This perspective provides an important starting point for understanding spiritual growth. Spiritual development cannot be reduced either to satisfying desires or to escaping from the world. A deeper question is how consciousness becomes sufficiently developed to recognize, understand and integrate the dimensions of experience that ordinarily remain outside awareness.

This question creates an important connection between Carl Jung’s analytical psychology and Edmund Husserl’s phenomenology. Although their projects are fundamentally different, both challenge the assumption that ordinary conscious experience provides a complete account of human existence. Husserl’s phenomenology proposes returning to experience itself—to the “things themselves”—rather than beginning with theoretical assumptions about what experience must mean (Husserl, 1900/2001; Zahavi, 2017).

For Husserl, consciousness is intentional: perceiving, remembering, imagining, desiring, fearing and loving are always directed toward something. Consequently, understanding human experience requires examining how something appears to consciousness and how it acquires meaning for the person experiencing it (Husserl, 1913/1983; Zahavi, 2017).

This is particularly relevant to spiritual development because human beings do not simply experience events; they interpret them. The same event may have radically different meanings for different people according to their histories, expectations, relationships, values and previous experiences.

Husserl’s concept of the *Lebenswelt*, or lifeworld, develops this point further. Human beings live within a world already structured by relationships, cultural traditions, habits, values and accumulated experiences. Previous experiences become sedimented and influence subsequent perception and interpretation (Husserl, 1970; Zahavi, 2017). Meaning is therefore not constructed from nothing. It develops through the individual’s continuing relationship with lived experience.

From Phenomenological Understanding to Jungian Integration

Jung provides a complementary psychological explanation for why individuals may not fully understand the meanings they attribute to their own lives. His theory proposes that psychic life extends beyond ordinary consciousness. Archetypal patterns, unconscious contents, the Persona and particularly the Shadow can influence perception and behavior without being fully recognized by the conscious ego (Jung, 1953–1979).

The Persona represents the social face through which individuals adapt themselves to external expectations. The Shadow contains aspects of personality that consciousness rejects, fails to recognize or considers incompatible with its preferred self-image. The problem, therefore, is not merely that people possess undesirable characteristics. They may become divided between the person they consciously believe themselves to be and aspects of themselves that remain unrecognized.

This division can become visible in intimate relationships, professional life, moral judgments and spiritual practices. Individuals may project characteristics onto other people that they cannot acknowledge within themselves. They may pursue goals that appear meaningful but are actually determined by social expectations or

unconscious needs. They may also construct an apparently successful life while experiencing a profound internal lack of coherence.

Jung's concept of individuation provides a developmental response to this fragmentation. Individuation involves the progressive differentiation and integration of the personality and a movement toward a more comprehensive relationship with the Self, understood as the totality and organizing principle of conscious and unconscious dimensions of personality (Jung, 1953–1979; Stein, 1998).

From this perspective, spiritual growth is not simply the acquisition of moral virtues. It involves becoming increasingly capable of knowing oneself, including those aspects that are uncomfortable, contradictory or initially unacceptable.

The archetypal approach has also been applied to literature and cinema. Studies using Jungian theory to examine *Who's Afraid of Virginia Woolf?*, for example, interpret psychological conflict through tensions between social identity, unconscious material and the search for greater psychological coherence (Falsafia et al., 2021). Such analyses illustrate how individuals may become trapped between their socially constructed identities and deeper psychological realities.

The Role of Transcendent Character Strengths

The development of an integrated personality may eventually be expressed through character strengths. Research using the Values in Action (VIA) framework places gratitude among transcendence-related strengths and has associated gratitude with positive dimensions of well-being and life satisfaction (Gillham et al., 2011; Shoshani & Slone, 2013; Wagner et al., 2019).

These findings are important, but they also raise a prior question:

How does an individual become capable of authentically incorporating virtues into his or her life?

Knowing that gratitude, love, courage or responsibility are desirable does not automatically make a person capable of living them. A deeper process of understanding and integration may be necessary.

This is where the comparison with Viktor Frankl becomes particularly useful.

Frankl and the Search for Meaning

Frankl places meaning at the center of existential development. Meaning can be discovered through creative activity and work, through experiences such as love, and through the attitude adopted toward unavoidable suffering (Frankl, 1959, 1962/1988).

This contribution is powerful because it emphasizes that human beings are not merely passive products of circumstances. Even in difficult situations, individuals retain a degree of freedom in choosing their attitudes and can orient their existence toward something meaningful.

Contemporary research similarly indicates that meaning in life is associated with well-being and resilience. Kero, Podlesek and Kavčič (2023), for example, found that a stronger sense of meaning was associated with better well-being among individuals experiencing pandemic-related stress.

Frankl's approach therefore provides an important answer to the question:

“Toward what should human existence be directed?”

However, from the perspective developed here, an important question remains:

How does a person come to understand what is genuinely meaningful?

This distinction is crucial.

A person can have a job without understanding why work is important to his or her identity. A person can love someone while unconsciously repeating destructive relational patterns. A person can establish ambitious goals while pursuing values that originate primarily from social expectations rather than from an integrated sense of self.

Consequently, meaning cannot necessarily be separated from understanding.

Understanding as a Missing Dimension of Meaning

The present synthesis therefore proposes that understanding should be considered an important dimension of spiritual development.

This does not mean adding a simple “fourth category” to Frankl's model. Rather, understanding may operate before and across the other sources of meaning.

A person needs some degree of understanding to distinguish:

- authentic love from emotional dependency;
- meaningful work from compulsive achievement;
- courage from impulsive risk;
- personal values from social expectations;
- genuine gratitude from social performance;
- spiritual development from avoidance of psychological conflict.

This becomes particularly important in intimate relationships.

Two people may possess love, common objectives and shared responsibilities and nevertheless fail to understand each other. They may repeatedly interpret the other's behavior through their own unresolved fears, expectations and projections.

From a Jungian perspective, the problem may therefore not be simply the absence of love. It may involve insufficient integration of the personality and unrecognized projections.

Phenomenology adds another dimension: each person lives within his or her own experiential world, where events, words and behaviors acquire particular meanings. Understanding the other person therefore requires more than observing behavior; it requires attention to how experience is lived and interpreted.

Thus, the capacity to understand oneself and others becomes an important foundation for authentic meaning.

Comparison of Jung and Frankl with the help of Husserl

Thinker	Central Question	Main Contribution	Relevance to Spiritual Growth
Edmund Husserl	How does experience become meaningful?	Phenomenology, intentionality and lifeworld	Helps the individual examine lived experience before imposing explanations upon it
Carl Jung	How can the individual integrate what remains unconscious?	Shadow, Persona, archetypes, individuation and Self	Helps transform psychological fragmentation into greater inner coherence
Viktor Frankl	What can orient human existence toward meaning?	Purpose, creativity, love and attitude toward suffering	Provides existential direction and motivation for meaningful action

Table 1- Comparison of Jung and Frankl with the help of Husserl (author's elaboration, 2026)

The three perspectives can therefore be understood as complementary rather than mutually exclusive.

Husserl clarifies lived experience; Jung addresses the integration of the person; Frankl provides existential direction.

This produces a developmental sequence:

Lived experience → phenomenological understanding → confrontation with unconscious contents → integration around the Self → authentic values → meaningful action.

Self-Integration and Spiritual Growth

The central proposition emerging from this synthesis is that spiritual growth requires more than finding a purpose. It requires developing the consciousness necessary to understand why particular things become meaningful to us.

Jung's concept of the Self is particularly useful because it places integration at the center of psychological development. The individual does not become spiritually mature by eliminating undesirable aspects of the personality. Instead, development involves recognizing and integrating previously divided dimensions of the self.

This also changes the meaning of courage.

Courage is not merely the ability to endure suffering. It can also mean the willingness to encounter aspects of oneself that threaten one's preferred identity.

The person who confronts the Shadow may discover motivations, fears, desires or weaknesses that contradict the image previously maintained. Spiritual growth therefore requires a form of honesty: the willingness to replace an idealized image of oneself with a more complete understanding of oneself.

In this sense, self-knowledge becomes a condition for authentic meaning.

Work can become an expression of creativity rather than merely external achievement.

Love can become a relationship between increasingly integrated persons rather than a mechanism for compensating for unresolved psychological needs.

Suffering can become an experience that is interpreted and integrated rather than merely endured.

Gratitude can become an authentic orientation toward existence rather than merely a prescribed positive emotion.

And courage can become the capacity to confront what one discovers internally.

Frankl's contribution remains valuable because he identifies important directions toward which this development can be oriented: purpose, creativity, love, responsibility and meaningful attitudes toward suffering (Frankl, 1959, 1962/1988).

However, Husserl and Jung help illuminate a preceding process: how the individual becomes capable of recognizing and integrating what is meaningful.

III. Conclusion

The comparison among Husserl, Jung and Frankl suggests that spiritual growth can be understood as a progressive movement from experience, through understanding and integration, toward meaningful existence. Husserl provides the phenomenological foundation by emphasizing lived experience and the processes through which things acquire meaning for consciousness.

Jung develops the psychological dimension by showing that consciousness does not contain the whole personality. Through the confrontation with the Shadow, the recognition of the Persona and the process of individuation, the individual can progressively integrate conscious and unconscious dimensions around the Self.

Frankl contributes the existential direction by showing how meaning can orient human beings toward creativity, love, purpose and an attitude toward unavoidable suffering.

Nevertheless, the synthesis developed here places particular emphasis on a dimension that is insufficiently explained by a purely purpose-oriented approach: understanding.

A meaningful life is not merely a life that possesses goals. It is a life in which the individual increasingly understands the experiences, relationships, values, desires and conflicts that give those goals significance.

The deepest form of spiritual growth can therefore be understood as self-transcendence through self-understanding and integration.

Husserl helps us understand experience; Jung helps us integrate the Self; Frankl helps us orient that integrated existence toward meaning.

The final proposition is therefore:

Meaning is not merely something we find. It is something we become capable of understanding, integrating and living.

IV. Advantages and Disadvantages of Collaborative Governance

The theoretical limitations of adversarial or managerial approaches can lead to experiments with collaborative governance (CG) (Busenberg, 1999; Futrell, 2003; Williams and Matheny, 1995).

Ansell and Gash (2007) explain that, in the typical adversarial or managerial process, non-state actors are external observers of decision-making. They may try to pressure or influence decision-makers in public bodies, but it is the body that is ultimately responsible for the outcomes of the policies.

Collaborative governance, on the other hand, transfers responsibility for decision-making from the agency to the actors acting collectively.

However, imbalances in resources, knowledge, and power among different actors, lack of experience in discussions about highly technical problems, varying incentives for collaboration among actors, management levels, and the diverse backgrounds of members have hindered the creation and operation of consortia in the Brazilian health sector.

Collaborative governance is a governance mechanism in which one or more public agencies directly involve non-state stakeholders in a formal, consensual, and deliberative process of collective decision-making, with the objective of creating or implementing public policies or managing public programs or assets (Ansell and Gash, 2007). Walter and Petr (2000, p. 495), for example, describe collaborative governance as a formal activity that “involves joint activities, joint structures, and shared resources,” and Padilla and Daigle (1998, p. 74) recommend the development of a “structured arrangement.” Collaborative local governance is an important topic in public administration, as it seeks to address governance failures, high costs, and the politicization of regulation, developing contingency approaches to local governance (Berthod et al., 2023).

Given the limited literature on communication and coordination problems in public health consortia, this study seeks to identify responses to these problems through a literature review, questionnaires, and interviews.

Collaborative governance has advantages and limitations. Therefore, it is important to evaluate the performance of collaborative governance processes to identify strengths and weaknesses, as well as the keys to successful implementation.

First, it is necessary to consider that individual interests can hinder dialogue between different groups.

The heterogeneity among municipalities in a country as vast as Brazil means that some local governments face greater financial difficulties than others, revealing different economic, political, and administrative capacities (Nascimento et al., 2021). Governments often hesitate to share authority due to skepticism regarding citizens' knowledge and capacity for self-organization, despite the value of local knowledge as a complement to scientific data (Pomeroy and Berkes, 1997).

Furthermore, governments may use co-management not as a mechanism for sharing power, but as a tool to achieve predetermined objectives, excluding local actors from meaningful participation (Gelcich et al., 2006; Miller et al., 2019). The participation of key (public) or service-providing (private) agencies with municipalities

and consortia can generate difficulties, given the different missions, visions, and objectives of these organizations. Similarly, the relationship between the municipalities themselves and public consortia, as we will see in the interviews, can create difficulties, given the different levels at which the management and administration of these entities operate, in addition to the issue of honesty in the handling of information and financial resources.

The contracting of private companies differs from subcontracting to other government units or non-profit organizations because the incentive for opportunistic behavior is often much greater in the for-profit private companies involved (Feiock, 2007).

Although costs are less frequently identified, the benefits of collaboration are commonly discussed in the literature. In service delivery, collaborations promote understanding and strengthen relationships among stakeholders (Resh et al., 2014), facilitate joint problem-solving (Doberstein, 2016), and develop contextually appropriate policy solutions (Leach et al., 2014; Wall and Jeffrey, 2006; Ostrom, 1990). In service production, collaborations provide flexibility to meet the needs of clients and jurisdictions (Milward and Provan, 2000; Provan and Kenis, 2008), reduce costs (Ostrom and Ostrom, 2019), and improve innovation in service delivery (Agranoff and McGuire, 2001). Above all, previous results support the hypothesis that health consortia increase outpatient care compared with municipalities that have not joined a consortium (Nascimento et al., 2021).

According to Nascimento et al. (2021), future research could conduct efficiency tests of clusters in specific consortia, more accurately assessing the effects of health policies in the regions served by these agreements and their contextual characteristics.

It is also necessary to consider transaction costs, which are the costs of information, negotiation, monitoring, and contract execution (Feiock, 2007).

The literature indicates that the provision of public services becomes more effective through knowledge sharing and economies of scale (Bel, Fageda, and Mur, 2014; Bel and Warner, 2015; Hulst and Montfort, 2007; Silvestre et al., 2019; Voorn, Genugten, and Thiel, 2019).

However, it is important to highlight the problem of information overload caused by various actors, especially political actors who lack technical support. A large amount of information can also come from the public, if they are invited to participate in the consortium, since, after all, they are the target audience.

However, according to Such et al. (2022), this is only a symbolic effort or a late inclusion of the community in the political cycle.

Still, there are some exceptions. The “Healthy and Happy Hague” project is a good example of collaborative governance that, by supporting community participation and involving professional organizations, improves the health of the population. It is important that there is a reciprocal relationship between all actors in the collaboration, regardless of their discipline or intellectual level (Lammeren et al., 2025).

To change the way social and health services are delivered, the neighborhood-oriented approach focuses on low socioeconomic neighborhoods and seeks to empower citizens, improve their resilience and their ability to promote personal well-being.

In addition to information overload, we must also consider the lack of information. Tavares and Feiock (2017) warn that coordination risks arise when local governments believe it is in their best interest to act together, but fail to do so due to incomplete information.

If the consortium considers the opinions of the population, we must take into account the importance of citizens’ political ideology in decisions about service delivery. In this case, a more direct measurement of the preferences of residents of participating cities would be useful (Sørensen and Torfing, 2005).

According to Tavares and Feiock (2017), the heterogeneity of preferences among communities leads to the adoption of more formal regional governance mechanisms.

However, the main problem lies elsewhere: “Although voluntary cooperation has been implemented as an alternative way to implement functional decentralization, self-organized intermunicipal governance is generally considered unusual and problematic due to its top-down perspective and: (i) potential variations in the legal-constitutional framework, local institutions and preferences, and (ii) difficulties in the interaction between potential governance mechanisms that affect transaction costs. Furthermore, it is important to study how different national institutional contexts structure the configuration and preferences of actors, the selection of tasks for collective action, and the mechanisms available to resolve collective action dilemmas (Andersen and Pierre, 2010; Feiock, 2009; Hulst et al., 2009). Ansell and Gash (2007) constructed a model with four variables: initial conditions, institutional design, leadership, and collaborative process (Figure 1).

Figure 1 - Collaborative Governance Model (Ansell and Gash, 2007)

The collaborative process is highly iterative and non-linear, and is therefore represented (with considerable simplification) as a cycle (Ansell and Gash, 2007).

They reduce the critical initial conditions to three main variables: imbalances in the resources or power of the different stakeholders, their incentives to collaborate, and their history of conflict or cooperation (Ansell and Gash, 2007).

V. Methodology

Semi-structured interviews with key stakeholders from established healthcare consortia in Brazil were qualitatively analyzed to identify best practices and successful organizational strategies. A qualitative design was selected because it permits exploration of organizational processes and provides insight into the complex, context-dependent nature of consortium operations.

Systematic text condensation was used to analyze interview data and generate detailed descriptions of consortium configurations and defining characteristics. This analytical approach supported understanding of the factors influencing the formation, sustainability, and effectiveness of consortia. Purposeful sampling guided the selection of participants, focusing on individuals affiliated with recognized and high-performing consortium organizations. Data collection took place between January and March 2026 through the survey available at <https://forms.gle/FDF8q6pBhkvjDJ99>

Before implementation, the interview guide was pilot-tested with two consortia located in São Paulo and Rio Grande do Sul, respectively, and revised accordingly by the author. Interviewers used the guide as a flexible framework to ensure coverage of key topics while permitting respondents to expand on relevant experiences and share illustrative examples. Direct quotations were documented whenever feasible, and comprehensive interview notes were subsequently revised for clarity.

The analysis involved an iterative cycle of coding, interpretation, discussion, and revision to refine emerging themes and strengthen the validity of the findings. To enhance trustworthiness, summarized results were returned to interviewees for verification before submission for publication.

VI. Brief History of Public Consortia in Brazil

Public consortia in Brazil operated primarily as administrative arrangements until 2005, when Law No. 11,107 of April 6, 2005 established general rules for the formation and contracting of public consortia.

This law provides for two types of contracts:

- 1- Cost-sharing contract.
- 2- Program contract.

A program contract is concluded with a federative entity (municipal, state, or federal) or with an entity of its indirect administration, for the provision of public services.

According to Article 2, the Union will only participate in public consortia in which all the States in whose territories the consortium municipalities are located are also part of the consortium. According to Article 3, the public consortium will be constituted by a contract whose execution will depend on the prior signing of a protocol of intentions, whose main clauses are (Article 4):

V. the criteria for authorizing the public consortium to represent the federated entities before other spheres of government in matters of common interest.

X – the conditions for the public consortium to enter into a management contract or partnership agreement;

Article 8 provides that the consortium members will only deliver resources to the public consortium through a cost-sharing agreement. A point particularly relevant to item 5 is the following:

§ 5. The consortium member that does not allocate, in its budget law or in additional credits, sufficient appropriations to cover the expenses assumed through a cost-sharing agreement may be excluded from the public consortium, after prior suspension.

6. Interviews with Health Consortia in São Paulo and Rio Grande do Sul

6.1. Interview with the São Paulo Consortium: Intermunicipal Consortium of the Western Metropolitan Region of São Paulo (CIOESTE).

CIOESTE was founded in 2013, bringing together 14 municipalities in the state of São Paulo.

Unlike the other consortia researched, this is a multi-purpose organization that works with mobility, health, education, environment, security, culture, and other sectors. Formed by the municipalities of Araçariquama, Barueri, Carapicuíba, Cajamar, Cotia, Ibiúna, Itapevi, Itu, Jandira, Osasco, Pirapora do Bom Jesus, Santana de Parnaíba, São Roque, and Vargem Grande Paulista, CIOESTE covers a region with more than 3 million inhabitants distributed over an area of more than 1,000 km². The cities that make up CIOESTE contribute approximately 3% to the National GDP and 10% to the state GDP, making it one of the country's most socioeconomically significant intermunicipal consortia.

The mayors' meetings are held periodically to design projects for mobility, health, education, environment, security, culture, and other sectors.

The consortium can enter into contracts, conduct procurement procedures, carry out public works, and seek external funding for projects under development.

The project manager of the CIOESTE Health Sector reports that the unit has five positions, including that of executive secretary.

According to the manager, a major problem is that CIOESTE has not yet completed an administrative reform, and difficulties remain in distinguishing commissioned (appointed) positions from positions filled through public competitive examinations. He states that one advantage of CIOESTE is that the amounts transferred to the consortium are directed to employee payments and maintenance rather than being retained as a general-purpose funding pool.

He describes CIOESTE as a political-administrative arrangement governed by public law, which facilitates direct contracting between the consortium and its member municipalities.

The manager also explains that the main function of CIOESTE Saúde is the accreditation of consultations, exams, and surgeries, but there is no direct contact with the citizen/patient as in CONSIM (Rio Grande do Sul).

The manager reports that one of the major difficulties is the understanding of the municipalities regarding adherence to the price registration record and that the great challenge is the sensitization of the health secretaries of the member municipalities. The manager emphasizes the need for regional research for better interaction between municipalities, the State, and the Federal Government.

The manager also describes the difficulty of persuading larger municipalities, which have more resources, to value the work of CIOESTE Saúde and says that a better understanding of the legislation is necessary, which is somewhat confusing due to overlaps and an excess of information and laws/decrees/ordinances imposed by the Ministry of Health.

As a multipurpose organization working across more than five policy sectors, CIOESTE must balance health priorities with demands from its other areas of activity. Although the city of São Paulo was not on the original list of CIOESTE member municipalities in 2013, on April 11, 2025, Mayor Ricardo Nunes officially included the capital, São Paulo, in the bloc 1. In the same year, the Mayors of São Roque and Cajamar assumed leadership of CIOESTE, with Mayor Guto Isa (São Roque) in charge 2, the president.

The project coordinator, administrative area of CIOESTE-Health sector, is pursuing postgraduate studies in management at FGV and, regarding the two questionnaires, stated the following in relation to the following points:

1. Integration of municipalities and reduction of information asymmetry.

With the help of CIOESTE-Health Sector, municipal managers will have greater technical support, reducing costs and also improving the sharing of human and financial resources. He emphasizes that with the “Now There Are Specialists” Program, CIOESTE-Health sector can contribute to this process by bringing together professionals with specific knowledge of local administrations and medical issues. This type of initiative is especially relevant for smaller municipalities, which often do not have sufficient teams of their own to develop complex projects in areas such as health, education, planning, environment or infrastructure, since CIOESTE covers various sectors, not just areas of medical knowledge.

2. Reducing regional inequalities and empowering smaller municipalities.

Consortia play a strategic role in reducing regional inequalities because they can mediate the relationship between municipalities and hospitals, as well as between municipalities and the State of São Paulo and the Federal Government.

3. Building trust among municipalities.

In addition to accountability, publication of minutes, and sharing of legislation, other mechanisms strengthen this trust, such as: transparency in the application of resources and dissemination of activity and results reports. However, unlike CONSIM 3 (interview below), there is no demonstration of results on the CIOESTE website 4. Despite all the questions about the transparency of the use of public resources in Brazil, the project management coordinator of CIOESTE-HEALTH stated that the mechanisms reduce uncertainties and demonstrate that resources and decisions are being conducted collectively and responsibly.

4. Main benefit generated by consortia

Although all benefits are relevant, the principal benefit is the strengthening of the institutional capacity of municipalities, especially smaller ones. This strengthened capacity, in turn, enhances the other benefits.

5. Concrete example of building trust and joint solutions

An example would be the area of health. Imagine that small municipalities face similar difficulties in guaranteeing specialized care or hiring certain professionals. Through the consortium, these municipalities can jointly identify this need, share information on demand, costs and availability of services, and develop a regional solution, such as the joint hiring of specialists, the creation of a shared service, or the organization of a care network.

6.2. Interview with CONSIM – Public Health Consortium, Palmeira das Missões, Rio Grande do Sul, Brazil

In brief, the responses of the director of CONSIM describe how a public health consortium supports cooperation among municipalities, particularly smaller ones with limited technical capacity. These municipalities often lack specialized staff in areas such as procurement, planning, regulation, and healthcare management. The consortium provides technical guidance, promotes collaboration, and facilitates the sharing of knowledge and experiences. It can also indirectly support initiatives like the *Aqui Tem Especialistas* program by helping municipalities coordinate regional planning and improve access to specialized healthcare services. Another important theme is governance and trust. Beyond financial accountability and sharing official documents, trust is strengthened through regular meetings, technical committees, joint planning, transparent management of resources, and continuous communication between the consortium and municipal health managers. Decisions are made collectively rather than individually, encouraging cooperation and ensuring that all participating municipalities have a voice in the decision-making process. The responses also highlight the main advantage of the consortium: economies of scale. By working together, municipalities can purchase medicines and services in larger volumes, negotiate better prices, reduce administrative costs, and share technical resources that would be difficult to maintain individually. This collaborative approach improves efficiency while expanding access to specialized healthcare, particularly for smaller municipalities. Finally, the document explains how demands are discussed within the consortium. Issues raised by municipalities or other stakeholders first undergo a technical evaluation covering financial, legal, and operational aspects. After this analysis, proposals are submitted to the appropriate governing body, such as the General Assembly or Executive Board, for collective discussion and approval. This process reflects a cooperative governance model in which decisions are based on technical analysis, dialogue, and consensus rather than unilateral action. Detailed interview evidence from the CONSIM director, based on the web survey available at <https://forms.gle/FDF8q6pBhkvjDJ99>, is presented below.

Taken together, the interviews with the CONSIM director and the project leader in the CIOESTE Health Sector suggest that health consortia would benefit from a stronger educational and knowledge-management component. Both interviews revealed gaps in technical knowledge concerning healthcare delivery as well as public management. One example is the terminology used for procurement. The interviews indicated uncertainty regarding the distinction between ordinary public procurement procedures and auctions used for the disposal of public assets. This distinction matters because the acquisition of medicines and healthcare services requires appropriate procurement mechanisms rather than procedures designed for the sale of unusable or seized property. The interviews also point to a broader governance challenge in the relationship between municipalities and the state government. Because the state possesses greater financial and institutional resources, clear governance standards are particularly important to ensure equitable participation in decision-making, transparency in the distribution of benefits, and regional planning that does not disproportionately favor the largest municipalities or those perceived as having closer relationships with state-level leadership. According to the consortium statute 5 and the executive secretary, one objective of the consortium is to rationalize expenditure on acquisitions. The interview responses referred to procurement procedures in this context, although the terminology used was not always precise. The statute also establishes a broader institutional purpose: representing member municipalities in matters of common interest before other public and private entities. This point is central to the analysis developed here. When organizations and their leaders prioritize individual institutional interests over the collective interests of citizen-patients, collaborative governance becomes more difficult. A knowledge-management model may help address this problem by creating organized mechanisms for sharing knowledge and other resources, encouraging social participation, and strengthening social control. Communities of practice, for example, offer a structured mechanism for knowledge exchange and can be connected to expert thematic groups that discuss technical problems and support the improvement of collaborative governance within consortia.

According to the protocol of intentions 6, CONSIM includes the municipalities of Boa Vista das Missões, Braga, Cerro Grande, Constantina, Coronel Bicaco, Engenho Velho, Jaboticaba, Lajeado do Bugre, Novo Barreiro, Palmeira das Missões, Ronda Alta, Sagrada Família, São José das Missões, São Pedro das Missões, and Três Palmeiras. Representatives met in Palmeira das Missões to formalize an intention of mutual cooperation and create a non-profit legal entity capable of promoting the joint purchase of healthcare services, with priority given to consultations, examinations, and procedures of medium and high complexity through coordinated management involving the private sector. In practice, however, the research indicates that CONSIM, like other consortia examined in the study, continues to concentrate heavily on lower-complexity procedures and faces difficulties in expanding access to a broader range of specialties and complex surgical procedures. The material reviewed for this study did not provide information on shared-cost agreements 7. When asked about the benefits generated by the consortium, the executive secretariat identified several: cost-effectiveness, quality, efficiency, economies of scale, innovation in public management, improved service

quality, greater fundraising capacity, stronger regional political coordination, standardization of procedures, and the joint development of solutions to common problems.

Regarding the principal challenges, the director identified differences in the administrative capacity of municipalities, financial constraints, frequent turnover among public managers, occasional political disagreements, initial resistance to shared decision-making, the continuing need for institutional alignment, adaptation to legal and regulatory requirements, and the difficulty of maintaining participants' commitment over time. He added: "Despite these difficulties, experience shows that collaborative governance tends to produce superior results compared with isolated models."

The questionnaire results reinforce several of these concerns. The main problems identified were insufficient financial resources, a shortage of qualified personnel, and limited technical or political support from the state government. When asked whether available financial resources were sufficient to meet demand for healthcare services, the response in the closed-question section was "strongly disagree." By contrast, the option indicating difficulty in integration among municipalities was not selected. In the section dealing with differences in resources among participants, the CONSIM director stated that support from state and municipal governments was insufficient and that stronger coordination between municipalities and the state was necessary. The options concerning improved professional qualifications and organizational restructuring were not selected in that question.

When asked, "Another common problem is that some participants may lack the skills and experience necessary to participate in discussions on highly technical issues. How can this situation be remedied?", the director responded: "Strengthening institutional capacity involves the continuous provision of training, workshops, technical consultancies, and the sharing of expertise among municipalities. Furthermore, permanent technical teams within the consortium play a fundamental role in supporting municipal managers during the development and execution of projects." However, when clarification was subsequently requested by email and telephone, no additional details were provided regarding the training activities or the permanent technical teams mentioned in the response.

The questionnaire also indicated difficulties in hiring and retaining professionals. When asked whether the consortium's healthcare team was sufficient in number and qualifications to meet the population's needs, the response was "I disagree." At the same time, the director stated that he "totally agree[d]" that a consortium bringing together municipalities of different sizes, and consequently their hospitals, could offer more effective services to patients in a context in which specialized services remain highly concentrated in Porto Alegre. This issue has practical visibility in Rio Grande do Sul, where patients from smaller municipalities frequently travel to hospitals in the capital. The article also notes the centralized character of hospital management in the state and the involvement of large Porto Alegre institutions in the management of hospitals in medium-sized cities such as Pelotas 8.

Professional education and technical knowledge are therefore important to the consortium's ability to implement federal initiatives such as the "Now There Are Specialists" Program. A questionnaire item asked whether the consortium could obtain better prices for medicines from private suppliers through public procurement. The response revealed uncertainty concerning the distinction between procurement modalities. The FGV material cited in this study discusses several legally recognized procurement procedures 9, while federal guidance also describes auctions used for the disposal of unusable or legally seized movable property 10. The distinction is important because an auction for the disposal of public assets is not the procurement mechanism used by a public health consortium to purchase medicines.

In response to a question concerning whether the consortium's principal objective is to evaluate the quality of projects and services reliably and collaboratively, thereby reducing transaction costs associated with uncertainty and information asymmetry, the director emphasized that a public consortium's purpose extends beyond the shared execution of services. In his view, the consortium creates a permanent environment of cooperation among municipalities in which information, experience, and technical knowledge can be shared transparently. Such integration can reduce information asymmetry, increase security in decision-making, lower administrative, operational, and financial costs, and strengthen collective bargaining power in negotiations with suppliers and other public entities.

On regional inequalities, the director stated that the consortium allows smaller municipalities to access programs, training, educational projects, and technical resources that would be difficult to develop independently. Cooperation can therefore promote greater balance among municipalities, improve the quality of public policies, and facilitate the dissemination of good practices across the region.

The interview also examined the tension between individual and collective interests through the perspective of rational-actor theory. When asked to what extent the maximization of individual benefits by each municipality could harm the functioning of the consortium, the director responded that cooperation weakens when a municipality seeks only to maximize its own gains without considering collective objectives. In his view,

sustainable benefits must be constructed collectively, and maintaining a balance between individual and collective interests is essential for preserving trust and continuity in shared actions.

A related question concerned the operationalization of mutual trust and reciprocity, drawing on the concept of social capital. The director explained that trust is built over time through the fulfillment of commitments, administrative transparency, accountability, and respect for collective decisions. Reciprocity is expressed when municipalities share solutions, experiences, technical teams, and institutional support even when there is no immediate individual benefit, thereby strengthening durable cooperative relationships.

When asked whether a high degree of responsibility, transparency, and autonomy eliminates the need for strict sanctions, the director answered that it does not. Although an institutional culture based on ethics, transparency, and accountability can reduce the occurrence of misconduct, control mechanisms and sanctions remain necessary to ensure legal certainty, equality, and the protection of collective interests. Ideally, he argued, sanctions should have a preventive and educational character and should be applied when necessary.

Finally, the interview addressed a recurrent theme in research on national culture: the interaction between professional and personal relationships (Hofstede, 2001; House, 2004; Lewis, 2003). In response to the question, “How do personal relationships and meritocratic considerations function within the consortium?”, the director stated: “Although the consortium participants did not intentionally include socialization in their meetings, they stated that they built bonds through a shared understanding of the demands of the work. Personal relationships facilitate communication and strengthen cooperation among managers, but decisions must remain grounded in technical, legal, and meritocratic criteria. Over time, a network of trust based on institutional coexistence is created, allowing participants to better understand the challenges faced by other municipalities and develop joint solutions.”

Regarding the question, “Given the imbalances of resources and power among the different stakeholders, how can we work with incentives for cooperation?”, the director responded: “The first step is to establish clear governance rules, ensuring equal participation in decisions. It is also important to develop compensation mechanisms, technical assistance to smaller municipalities, transparency in the distribution of benefits, and planning based on regional interests, avoiding excessive concentration of advantages.”

VII. A Model and Knowledge-Management Plan for Public Consortia in São Paulo and Rio Grande do Sul

Knowledge management (KM) has been defined in several ways in the literature. According to Rothberg and Erickson (2004), KM is an organizational effort to capture, codify, organize, and redistribute tacit knowledge, transforming it into explicit knowledge that can be shared across the organization. Similarly, Bali, Wickramasinghe, and Lehaney (2009) describe KM as a collection of tools, techniques, strategies, and technologies designed to leverage an organization’s intangible assets by extracting relevant data, information, and knowledge to support effective decision-making. However, Rothberg and Erickson (2004) argue that knowledge alone is static and creates value only when it is applied by individuals, thereby becoming intelligence.

The relationship between knowledge, intelligence, and culture has also been explored in the literature. Roland (2000) provided practical explanations of how cultures develop and examined the relationship between societal structures, knowledge, and intelligence. Research suggests that historical and environmental conditions have significantly influenced the emergence of cultural orientations such as collectivism and individualism. For example, Fincher et al. (2008) and Murray and Schaller (2010) found that regions with a historically high prevalence of infectious diseases tended to develop more collectivist cultures. In such environments, restricting individual behavior and limiting interactions with outsiders may have increased community survival by reducing disease transmission.

Kroeber (1949) emphasized that culture distinguishes humans from other species because it enables the accumulation and transmission of knowledge across generations. Unlike instinctive animal behavior, human actions are largely guided by socially acquired norms and learned experiences. As a result, individuals depend more on education, observation, and socialization than on genetically predetermined behaviors. This cumulative nature of culture allows each generation to inherit the achievements of previous generations while simultaneously contributing new ideas and innovations. Consequently, culture not only shapes individual behavior but also creates opportunities for creativity, adaptation, and social progress.

The importance of knowledge has become increasingly central to discussions of economic development and organizational competitiveness. Many scholars argue that governments should place scientific research and innovation at the center of national development strategies because scientific knowledge contributes to technological advancement, economic growth, democratic development, and improvements in quality of life. However, knowledge alone does not automatically generate value. Rothberg and Erickson (2004) contend that knowledge remains largely inert unless it is interpreted and applied by individuals in practical contexts.

Therefore, competitive advantage arises not simply from possessing knowledge but from transforming it into effective action (intelligence).

Drawing upon these theoretical foundations, this study proposes the Culture–Knowledge–Intelligence (CKI) model. The model integrates national culture, knowledge, and intelligence into a unified conceptual framework, arguing that culture establishes the conditions under which knowledge is created and shared, while intelligence represents the effective application of knowledge in decision-making. The proposed framework, presented in Figure 2, illustrates the dynamic relationships among these three constructs and provides the theoretical basis for the analyses developed in this research.

Figure 2. The Culture–Knowledge–Intelligence Model (adapted from Choo, 1998, De Angelis, 2016)

The premises of the CKI model are:

- (i) Culture is formed by the beliefs, values, assumptions, and traditions of a society (Schein, 1985)
- (ii) The central argument is that, for education to succeed in its tasks, the curriculum as its core must be restructured or reformulated around the four pillars of learning: learning to know, learning to do, learning to live together, and learning to be (Nan-Zhao, 2000)
- (iii) The three pillars of intelligence are: forecasting, strategy, and action (Rothberg and Erickson, 2004)

The CKI model is based on three assumptions (Table I):

Hypotheses	Sources	Results
Culture has a positive impact on knowledge	The effectiveness of knowledge management initiatives is strongly influenced by the extent to which they align with the cultural characteristics of an organization. Before implementing KM systems or practices, organizations must first understand their existing cultural environment, as cultural values, norms, and shared assumptions determine how knowledge is created, exchanged, and utilized (de Ré et al., 2017).	supported
Culture has a positive impact on intelligence	Culture serves as a fundamental mechanism that shapes collective behavior and organizational dynamics. It affects the way individuals interpret information, approach challenges, collaborate with others, and make decisions in different contexts (Schein, 1985). Consequently, organizations with cultures that encourage openness, trust, learning, and collaboration are more likely to develop effective knowledge-sharing practices.	supported
Knowledge has a positive impact on intelligence	Knowledge management plays a strategic role in strengthening organizational capabilities by enabling the efficient use of available knowledge resources. When properly developed and integrated into organizational processes, KM contributes to improved performance, enhances the ability to identify and solve problems, and supports more accurate and timely decision-making (Liebowitz, 2019).	supported

Table I. Premises of the CKI model (own elaboration, 2026).

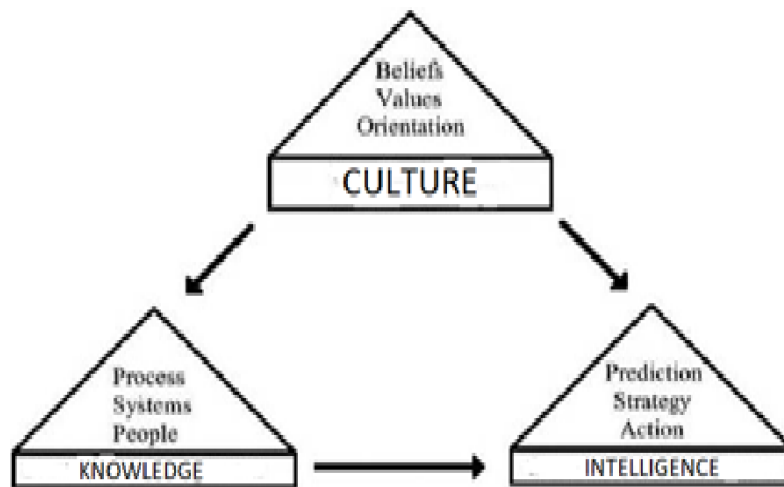


Figure 1- The CKI model (adapted from Choo, 2002).

The Culture–Knowledge–Intelligence (CKI) model highlights the interconnected nature of cultural characteristics, knowledge processes, and intelligence development. Within the context of Public Health Consortia, the findings demonstrate that culture represents a fundamental element in enabling the creation, exchange, and effective utilization of knowledge. Although organizations may possess significant expertise and information resources, these assets cannot generate value unless individuals are willing to share and apply what they know. Cultural barriers, such as limited trust, lack of collaboration, and resistance to knowledge exchange, often prevent the effective circulation of knowledge among stakeholders.

Therefore, establishing an organizational culture that values knowledge management (KM) is essential for strengthening collaboration and improving collective performance. Developing awareness of the strategic importance of KM can contribute to building trust, increasing engagement, encouraging responsibility, and fostering transparency among participants. These cultural conditions are particularly important in environments that involve multiple actors, such as public institutions, academic organizations, private enterprises, and community stakeholders.

Consistent with previous research, this study reinforces the argument that a supportive organizational culture is a key driver of successful knowledge management practices (Davenport and Prusak, 2000; Nonaka and Takeuchi, 1995; Gold et al., 2001; Janz and Prasarnphanic, 2003; Lee and Choi, 2003; Donate and Guadamillas, 2010). A culture that promotes cooperation, learning, and knowledge sharing creates the necessary foundation for KM initiatives and facilitates the transformation of individual knowledge into collective organizational capabilities.

Ultimately, culture provides the environment in which learning occurs. It shapes how individuals interact with internal and external sources of knowledge, influences openness to new ideas, and determines the extent to which organizations can learn, adapt, and innovate. In this sense, cultural development is not only a prerequisite for effective knowledge management but also a central mechanism through which collective intelligence can emerge.

From Knowledge Management to Collective Intelligence in Health Consortia

The literature reviewed in this study suggests that one of the principal challenges facing the “Now There Are Specialists” Program is not only expanding access to specialist care but also improving the way knowledge is generated, shared, and incorporated into healthcare decision-making. From this perspective, the central practical question is not simply how to increase the number of specialists, but how health consortia can transform dispersed clinical expertise into organizational knowledge that supports better governance and more informed public policies.

This concern leads to the following practical question:

How can knowledge management contribute to the development of collective intelligence within public health consortia, enabling multidisciplinary collaboration and supporting more effective implementation of the “Now There Are Specialists” Program?

This question complements the broader research objective of investigating how interdisciplinary medical knowledge influences strategy, planning, and management within Brazilian health consortia. Rather than focusing exclusively on administrative coordination, the study examines how organizational learning can strengthen decision-making in environments characterized by technical complexity and institutional fragmentation.

The proposed Culture–Knowledge–Intelligence (CKI) Model offers one possible response. The model assumes that effective governance begins with an organizational culture that values collaboration, openness, and continuous learning. These cultural foundations facilitate knowledge management processes through which scientific evidence, professional experience, and institutional practices are shared across organizations. The final stage—organizational intelligence—consists of transforming this accumulated knowledge into strategic decisions, policy recommendations, and continuous improvements in healthcare delivery.

To illustrate this process, the research examines three medical fields that involve complex clinical decision-making: urology (HoLEP and TURP), ophthalmology (LASIK and PRK), and psychiatry (the theoretical perspectives of Carl Jung and Viktor Frankl). These cases are not analysed to identify a universally superior clinical approach. Instead, they demonstrate that different treatments or theoretical frameworks may be appropriate depending on patient characteristics, clinical evidence, professional expertise, and contextual factors. Consequently, healthcare managers require mechanisms that enable access to multidisciplinary knowledge rather than relying solely on administrative procedures.

Based on this perspective, the study proposes that public health consortia establish multidisciplinary thematic groups composed of healthcare professionals, managers, researchers, and other relevant stakeholders. These groups would function as collaborative environments for discussing scientific evidence, exchanging professional experiences, identifying best practices, and supporting evidence-based decision-making on complex healthcare issues. Such an approach extends beyond the current emphasis of the “Now There Are Specialists” Program on expanding specialist availability by incorporating systematic knowledge sharing as a strategic component of collaborative governance.

Accordingly, the CKI Model contributes to the Program by connecting organizational culture, knowledge management, and collective intelligence into a single governance framework. This integration enables health consortia not only to coordinate healthcare services more effectively but also to create sustainable organizational learning processes that improve planning, strengthen strategic decision-making, and enhance the quality of specialized healthcare provided through the Brazilian Unified Health System.

Conclusions

This research argues that the long-term success of Brazilian intermunicipal health consortia depends less on expanding institutional structures than on improving the quality of governance through the strategic use of knowledge. While financial resources, legal frameworks, and administrative procedures remain essential, they are insufficient to ensure effective regional cooperation unless accompanied by organizational mechanisms that promote learning, coordination, and evidence-based decision-making. The comparative analysis of the CIOEST and CONSIM consortia demonstrates that many of the challenges facing regional healthcare are rooted in fragmented organizational knowledge rather than in the absence of technical solutions. Managers are required to make decisions that involve legal, financial, political, and clinical considerations, yet they often operate without structured processes for integrating expertise from different disciplines. As a result, opportunities for organizational learning and innovation are frequently lost, reducing the capacity of consortia to respond effectively to increasingly complex healthcare demands.

The interviews further indicate that governance is influenced by institutional relationships as much as by formal regulations. Differences in administrative capacity, communication, and intergovernmental coordination create uneven conditions for cooperation among municipalities. Strengthening collaborative governance therefore requires more than procedural reforms; it requires environments in which information, professional experience, and scientific evidence circulate efficiently among all participating organizations. Based on these findings, this study proposes the Culture–Knowledge–Intelligence (CKI) Model as a governance framework for public health consortia. The model recognizes organizational culture as the foundation for collaboration, knowledge management as the process through which expertise is generated and shared, and organizational intelligence as the capacity to transform that knowledge into strategic action. Together, these three dimensions create a continuous learning cycle capable of supporting more transparent governance, stronger institutional coordination, and improved public health outcomes.

A practical implication of the CKI Model is the establishment of multidisciplinary thematic groups that extend collaboration beyond routine administrative activities. These groups would enable healthcare professionals, public managers, researchers, and technical specialists to collectively analyse complex clinical

and organizational issues, disseminate evidence-based practices, and develop coordinated responses to regional healthcare challenges. Such collaborative structures would complement existing institutional arrangements while strengthening the implementation of national initiatives such as the “Now There Are Specialists” Program. The evidence gathered in this study indicates that the principal challenge for Brazilian public health consortia is not merely expanding healthcare capacity but improving their ability to learn, adapt, and coordinate knowledge across institutional boundaries. Sustainable improvements in specialized healthcare depend on governance systems capable of integrating scientific evidence, managerial experience, and regional priorities into coherent decision-making processes. In this respect, health consortia should be viewed not only as administrative arrangements but also as organizations that generate, organize, and apply knowledge to address complex public health problems.

The comparative analysis also demonstrates that regional inequalities cannot be addressed solely through additional financial resources or the expansion of medical infrastructure. Smaller municipalities require institutional support that enables them to access specialized expertise, participate more actively in regional planning, and benefit from shared organizational capabilities. Strengthening networks of cooperation among municipalities allows scarce technical resources to be distributed more efficiently while reducing duplication of efforts and improving service coordination.

These findings reinforce the importance of adopting governance models that combine collaborative decision-making with structured knowledge management processes. The proposed Culture–Knowledge–Intelligence (CKI) Model offers one possible framework by connecting organizational culture, interdisciplinary knowledge exchange, and evidence-based intelligence into a continuous cycle of institutional learning. Through thematic working groups, communities of practice, and systematic knowledge sharing, health consortia can strengthen strategic planning, improve policy implementation, and respond more effectively to the evolving needs of the Unified Health System (SUS).

Rather than treating knowledge as a by-product of healthcare delivery, this study argues that it should be recognized as a strategic public resource. Organizations capable of transforming individual expertise into collective intelligence will be better positioned to support national initiatives such as the “Now There Are Specialists” Program, promote more equitable access to specialized healthcare, and strengthen the long-term resilience of Brazil’s regional health governance system.

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- [87] **Ethical considerations:** Regulatory institutions or other bodies have not raised any concerns regarding the integrity and transparency of the study, which follows the forms available here: <https://cdn.who.int/media/docs/default-source/documents/ethics/informed-consent-for-qualitative-studies.doc?>
- [88] However, the executive secretaries did not sign the form after answering the survey available at <https://forms.gle/FDF8q6pBhkvjDJ99>, despite having stated by telephone that they would send it. Nevertheless, they did submit their answers to the questions via email, demonstrating their participation in the survey. This documentation was shared with the publisher and can be requested directly for verification.
- [89] 1 From 2016 to 2022, zoning incentives accelerated the proliferation of studio apartments in São Paulo, increasing their share of new housing launches from 12% to 34%. Regulatory ambiguities allowed Social Interest Housing programs to be appropriated by higher-income real estate markets, transforming compact housing from a tool for social provision into an investment-driven asset class. The expansion of short-term rental platforms further encouraged speculative uses of centrally located small units, while the 2023 zoning reform failed to redistribute economic activity or address persistent socio-spatial segregation (Cavalcante et al., 2026)
- [90] 2 That same year (2025), councilors Maquinho Arrida and Daniela Castro filed a complaint with the Public Prosecutor’s Office regarding the illegal collection of the tax, proving that the basis for calculating the IPTU (Property Tax) is the market value of the property (article 33 of the CTN - National Tax Code), and that it is inconsistent for the São Roque city hall to use the Generic Valuation Plan, which overestimated the value of the property. The city hall, in its defense, stated through local media that residents who feel they have been harmed can contact the city hall to request a review of the IPTU calculation.
- [91] 3 <https://sim.digifred.net.br/consim/>
- [92] 4 <https://cioeste.sp.gov.br/>
- [93] 5 <https://consimrs.com.br/documentos/Estatuto%20Consim%202023.pdf>
- [94] 6 <https://consimrs.com.br/documentos/protocolo%20de%20inten%C3%A7%C3%B5es.pdf>
- [95] 7 <https://www.consimrs.com.br/index.php/2014-04-08-15-06-22>.
- [96] 8 On 10.04.2026, the mayor of Pelotas, Fernando Marroni, signed in Porto Alegre the agreement that formalizes the partnership already underway between the City Hall and the Conceição Hospital Group, the main driver and organizer of the Unified Health System (SUS) in the southern region of Brazil (<https://pelotas.rs.gov.br/noticia/prefeito-assina-convenio-com-o-grupo-hospitalar-conceicao-para-gestao-do-hps>).
- [97] 9 <https://diretorio.fgv.br/disciplina/modalidades-de-licitacao-pregao-concurso-leilao-concorrencia-e-dialogo-competitivo>
- [98] 10 <https://www.gov.br/compras/pt-br/nllc/legislacao-14-133-por-tema/licitacoes/leilao>