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Concept Paper

Library Organizational Models in Academic Health Systems: A Mission-Driven Framework for Strategic Decision-Making

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Abstract

Background: Academic health sciences libraries face organizational challenges because medical and health sciences schools are part of integrated academic health systems, yet there remains a lack of systematic guidance on structuring these libraries. **Purpose:** To create a mission-driven analytical framework that examines library organizational models within academic health systems, focusing on service delivery throughout the educational continuum and utilizing hub-spoke organizational principles from healthcare. **Methods:** We conducted a systematic literature review, thematic analysis, and iterative framework development grounded in organizational theory and healthcare delivery principles to develop a mission-driven decision framework. **Results:** Analysis reveals three main organizational models: independent (school-based), integrated (university library system), and hub-spoke (distributed). There is no single best model—success depends on institutional context, goals, resources, and stakeholder needs. Mission alignment should guide organizational design, with cost and feasibility considerations coming into play only after mission objectives are met. Hub-spoke models offer benefits for geographically dispersed systems, requiring higher initial investment but providing a strong return through reduced duplication and increased efficiency. Supporting the educational continuum from undergraduate to continuing medical education demands careful organizational planning to address service fragmentation during transitional phases. **Conclusions:** Choosing an organizational model involves a systematic, mission-driven analysis that aligns institutional missions with service needs and matches these needs to suitable organizational structures. This framework is the first to offer a comprehensive analytical method for making managerial decisions in complex academic health system environments, including practical guidance for implementation and economic validation. It shows that structures aligned with the mission can lead to positive returns on institutional investment.

Keywords: academic health systems; health sciences libraries; organizational models; hub-spoke model; educational continuum; mission-driven organizational design; library administration; implementation science

Key Terminology

Throughout this manuscript, we use specific terms consistently:

Table 1. Core Terminology and Definitions.

Term	Definition	Key Distinguishing Features
Academic Health System (AHS)	Integrated organization combining medical education, biomedical research, clinical care delivery, and community health missions under unified or coordinated governance	Multiple missions, complex stakeholder ecosystem, distributed operations
Organizational Model	One of three archetypal structural frameworks (independent, integrated, hub-spoke) characterized by reporting relationships, resource allocation, and service delivery patterns	Conceptual framework used for analysis and comparison
Organizational Structure	The actual implemented arrangement of reporting, governance, and operations at a specific institution	May combine elements from multiple models; context-specific implementation
Independent (School-Based) Model	Library operates as unit within medical school with director reporting to dean, school-funded budget, and governance within school administration	Autonomy within school, direct educational alignment, single-site focus
Integrated (University Library) Model	Health sciences library services provided as part of comprehensive university library system with shared infrastructure and centralized operations	Economies of scale, shared services, potential for specialized positions
Hub-Spoke Model	Organizational structure featuring centralized specialized expertise and coordination functions (hub) connected to distributed service points (spokes) providing local access	Combines specialization with geographic reach; requires coordination infrastructure
Mission-Driven Design	Analytical approach determining organizational structure through systematic translation: institutional missions → essential services → service delivery characteristics → enabling organizational structures	Mission alignment is PRIMARY principle; other considerations are subordinate
Educational Continuum	The complete trajectory of physician development from undergraduate medical education (UME) through graduate medical education/residency (GME) through continuing medical education (CME) and lifelong learning	Emphasizes progressive competency development requiring coordinated support

1. Introduction

1.1. The Problem and Its Strategic Importance

Over the past thirty years, academic health systems have evolved from simple, single-campus medical schools into complex, distributed networks. These now include multiple clinical sites, diverse health professions programs, geographically dispersed training environments, and intricate stakeholder ecosystems. Libraries, initially designed for medical students on a single campus, now

must support a wide range of users: residents at community hospitals, research center faculty, clinicians at satellite clinics, nursing and pharmacy students at various locations, and alumni participating in continuing education while working. Despite these changes, many institutions' organizational structures still reflect outdated models focused on geographical concentration and traditional education cores.

Although the importance of library organizational structure in achieving an institution's mission is evident, there is surprisingly limited comprehensive guidance to inform evidence-based decision-making [1,5,6]. Library directors often lack detailed frameworks for evaluating options and predicting outcomes when considering organizational changes [7]. Similarly, administrators in academic health systems often lack access to comparative data on costs, benefits, and organizational effectiveness [8]. For new academic health systems, particularly those in international contexts where integrated systems are built from scratch rather than through consolidation, guidance on the optimal library organizational structure is scarce [9]. The field generally relies on institutional tradition, reactive budgeting, and peer imitation rather than on systematic analysis of how organizations can best support institutional goals and missions [10].

1.2. Purpose and Research Questions

This research addresses a gap in systematic knowledge by developing an evidence-based analytical framework to support decision-making in library organizations within academic health systems. The framework emphasizes mission-driven analysis as the fundamental principle of organizational design and provides structured approaches for translating institutional missions into requirements for organizational structure.

This study investigates four interconnected questions to facilitate a structured analysis of organizations. First, it assesses the organizational models adopted by academic health sciences libraries within academic health systems and the institutional factors that influence their success across contexts [3,4]. Second, it explores how healthcare delivery models, particularly hub-and-spoke structures that combine centralized expertise with broader access, can inform the organization of library services in academic health systems [12,13]. Third, it considers how libraries can design services to support the entire educational continuum—from undergraduate medical education to residency, continuing medical education, and lifelong professional development [14,15]. Fourth, it identifies principles that underpin mission-driven organizational design, applicable systematically across various institutional contexts, while acknowledging that specific organizational solutions must be adapted to local conditions [16].

1.3. Scope and Significance

This study investigates academic health sciences libraries within integrated academic health systems that include educational, research, clinical, and community service roles [17]. It examines the organizational structure, governance, service delivery models, resource allocation, and the process of organizational transformation. Although primarily focused on North American examples, the study develops adaptable frameworks for different regional contexts [18].

The significance of this work operates at multiple levels. For library practice, it provides systematic frameworks enabling directors and administrators to analyze organizational options, make strategic decisions grounded in mission requirements, and implement organizational transformations effectively. [7,19] For academic health system leadership, it clarifies how library organizational structure affects institutional mission achievement and provides economic analysis supporting resource allocation decisions. [8] In the library and information science field, it advances organizational knowledge by integrating organizational theory, implementation science, and mission-driven analysis. [11,20] For healthcare education broadly, it demonstrates how information service infrastructure can be organized strategically to support distributed educational, research, and clinical operations. [21]

2. Conceptual Framework and Literature Foundations

2.1. Mission-Driven Organizational Design: Establishing the Foundational Principle

This research emphasizes mission alignment as the central principle guiding how libraries are organized within academic health systems [22,23]. It proposes that the organizational structure should be developed through a systematic analysis that starts with the institution's mission, identifies essential services and delivery needs, and finally designs the organizational frameworks to support these elements [24]. This mission-centered approach represents a significant departure from traditional organizational analysis, which often relies on existing models—such as peer institutions' structures, prescriptive theories, or conventional practices based on tradition or convenience [10].

The mission-driven framework challenges the conventional method by initially asking, "What must this library do to support the achievement of the institutional mission?" before contemplating, "What organizational structure best supports those key functions?" [25] This viewpoint regards organizational structure as a variable influenced by mission needs rather than a choice based on theory or the success of peers [26]. It suggests that organizational analysis should be customized for each institution's specific mission, since different goals require different services and potentially different structures [27]. Additionally, this method offers a straightforward way to evaluate effectiveness: does the organizational structure enable the delivery of services essential for fulfilling the institutional mission?

2.1.1. The Mission-to-Structure Translation Process

The mission-driven framework functions via a four-stage translation process that systematically transforms abstract institutional mission statements into tangible organizational structure requirements [22].

Figure 1 illustrates this convergent process, showing how broad institutional missions progressively narrow through systematic analysis to a derived organizational structure. The funnel shape visually communicates the core principle: structure is a dependent variable determined by mission requirements, not an independent choice.

Stage 1: Mission Analysis begins with a comprehensive review of the academic health system's actual functions, avoiding generic mission statements [29]. The education mission needs a clear definition: which educational programs are offered, their levels, student numbers, teaching methods, and program locations [30]. Similarly, the research mission requires detailed specifics: research funding amounts, main research areas, key methodological approaches, and existing infrastructure [31]. The clinical mission analysis examines the patient populations served, clinical specialties and services, the geographic scope of clinical activities, and quality-improvement priorities [32]. The community mission assessment details commitments to community involvement, population health initiatives, and public education roles [33].

Stage 2: Service Requirements Mapping systematically determines the key library services needed to accomplish the specific missions outlined in the earlier analysis [34].

Table 2. Service Requirements by Mission Domain.

Mission Domain	Primary Stakeholders	Essential Services	Library	Consequence of Absence	Mission Criticality
Undergraduate Medical Education (UME)	Medical students, educational faculty	Curriculum-integrated information instruction; resources and research support	literacy study spaces; for	Students graduate without required information literacy competencies; educational quality	HIGH

		scholarly projects; clinical resources during rotations	declines; accreditation jeopardized	
Research Mission (Basic-Level)	Faculty at primarily teaching institutions	Literature searching and retrieval; interlibrary loan; basic reference consultation; citation management support	Faculty conduct literature reviews less efficiently; publication productivity constrained	MODERATE
Research Mission (Research-Intensive)	Faculty at institutions with >\$50M research expenditures	Systematic review services with librarian co-authorship; bioinformatics consultation; research data management; scholarly communication expertise; bibliometrics	Research quality compromised; researchers cannot compete for funding; compliance with funder mandates fails	HIGH
Clinical Care Mission	Attending physicians, residents, fellows, advanced practice providers	Clinical decision support tools at point of care; embedded clinical librarian services; support for practice guideline development	Clinicians make decisions without current evidence; clinical quality suffers; patient safety compromised	HIGH
Community Service Mission	Public, patients, community partners	Consumer health information; health literacy resources; training for professionals in patient education	Community engagement opportunities missed; population health impact limited	MODERATE

Stage 3: Service Characteristics Analysis explores the unique features of each critical service that influence its delivery methods within the organization [35].

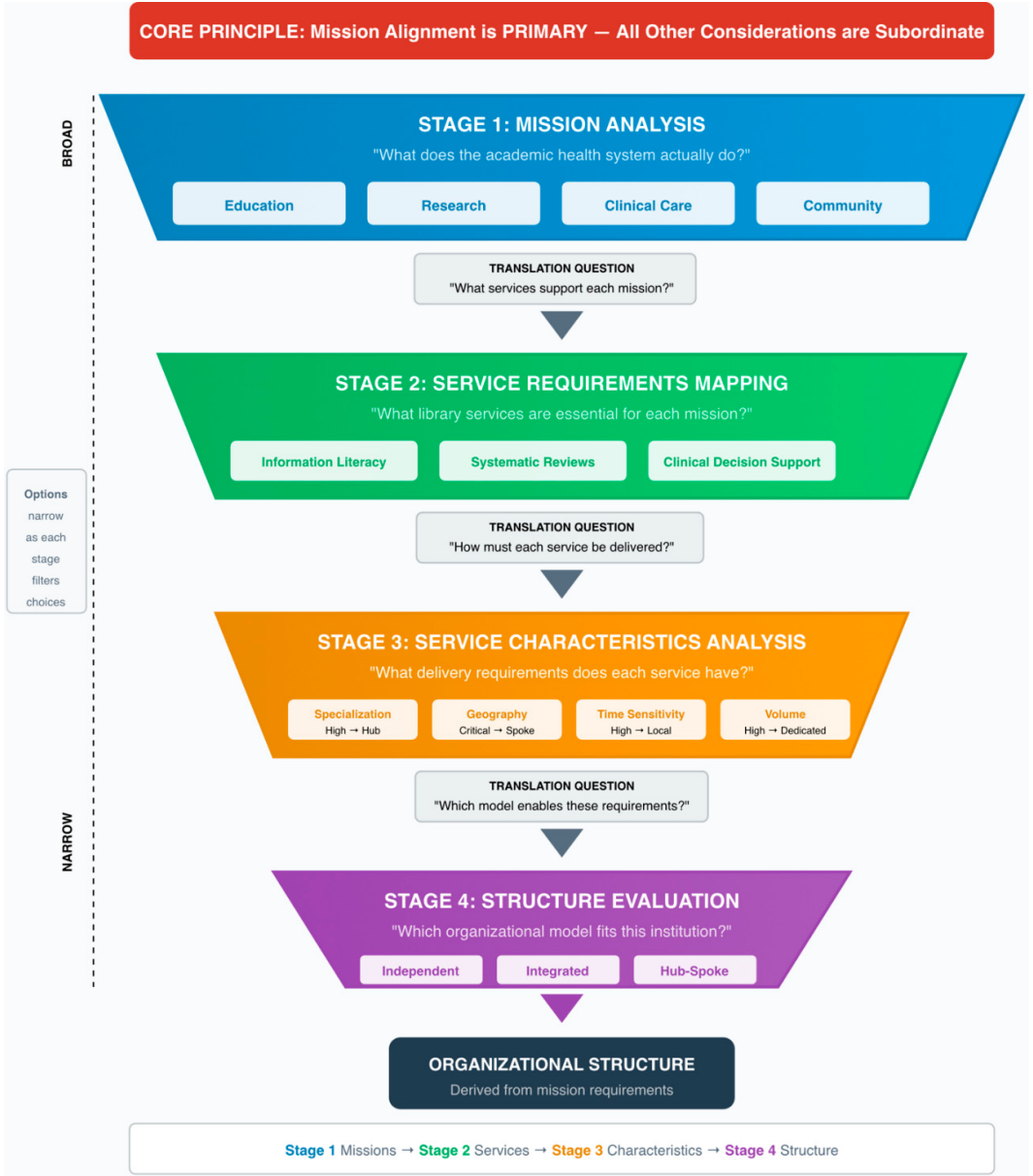


Figure 1. Mission to Structure Translation Framework.

Table 3. Service Delivery Characteristics Analysis Framework.

Characteristic Dimension	High/Critical Level	Moderate/Preferential Level	Low/Independent Level	Organizational Implication
Specialization Level	Systematic reviews requiring methodological sophistication; bioinformatics requiring	Research consultation requiring professional knowledge; information literacy instruction	Circulation services; basic access support; routine interlibrary loan	High specialization favors hub concentration

	computational expertise			
Geographic Dependence	Clinical embedding requiring physical presence at care sites; student services requiring campus proximity	Reference consultation benefiting from face-to-face but functional via video	Systematic reviews fully location-independent; electronic resource management	Geographic dependence requires spoke presence
Time Sensitivity	Clinical questions requiring evidence within hours; urgent grant deadlines	Literature support for manuscripts needed within days	Systematic review projects unfolding over months	High time sensitivity demands local presence
Volume and Frequency	Information literacy instruction in hundreds of sessions annually; daily clinical consultations	Systematic review requests averaging 30-50 annually	Specialized methodology consultation occurring occasionally	High volume justifies dedicated positions

Stage 4: Structure Evaluation marks the final step in the translation process, in which service requirements identified from the mission analysis are aligned with organizational capabilities. At this stage, the key question is: considering the services this library needs to provide for institutional mission success, and the characteristics of those services that influence how they are delivered, which organizational structures best support effective service delivery?

2.1.2. Mission Primacy: Why Mission Alignment Must Be the Primary Principle

A central and deliberate aspect of this conceptual framework is highlighting that mission-driven analysis serves as the foundational and vital principle of organizational design, rather than merely one element to balance with others [37]. This focus on its priority is essential to ensuring the framework's logical consistency and real-world applicability.

Imagine mission alignment as just one of many equally important factors. In such cases, organizations might focus on secondary issues like cost savings, ease of implementation, or popular management theories, which can lead to sacrificing mission support—either intentionally or unintentionally [38]. For instance, budget cuts meant to save costs by reducing essential services often harm mission effectiveness, even if they lower expenses [39]. By prioritizing mission alignment as the core principle and explicitly ranking other factors below it, the decision-making process gains a clear hierarchy [40].

2.2. Organizational Theories as Analytical Tools

The conceptual framework clearly positions organizational theories—such as stakeholder theory, resource dependency theory, institutional theory, and service delivery models—as analytical tools for understanding organizational behavior, rather than as prescriptive templates to be applied universally [41,42].

Organizational theories provide valuable insights into why specific structures thrive or fail in particular contexts [43]. Stakeholder theory explains which interests are emphasized by different organizational structures and which might be neglected [44]. Resource dependency theory illustrates how structures are influenced by reliance on vital resource providers [45]. Institutional theory demonstrates how organizations modify their structures to meet external legitimacy and professional standards [46].

2.3. Literature Review: Findings and Implications

The literature review revealed notable gaps in understanding library organizational models within academic health systems. Most existing research is descriptive rather than analytical, emphasizing organizational structures without examining the reasons for their choices or their impact on outcomes. Publication bias often favors success stories, and the predominance of studies conducted in North America limits insights into their applicability elsewhere. There is little comparative analysis among different models, and economic evaluations are rare. While hub-spoke models are mentioned in practical contexts, few studies explicitly analyze them using this framework. Moreover, fragmentation across the educational continuum is widely acknowledged, yet effective, systematic solutions are still lacking.

2.4. Accreditation Requirements: Establishing Minimum Standards

Accreditation bodies for medical education and residency training set minimum standards for library resources and services that organizational structures must support [51].

Table 4. Accreditation Standards and Organizational Implications.

Accrediting Body	Applicable Standard	Key Requirements	Organizational Implications
LCME	Standard 6.1: Library Resources and Staff	Sufficient resources and staff at all sites; adequate personnel with expertise; training in literature searching	Distribution requirement: challenges campus-only models. Expertise requirement: cannot rely solely on non-professional staff.
LCME	Standard 7.5: Self-Directed and Lifelong Learning	Prepare students for lifelong learning; information literacy as core competency	Curriculum integration imperative: library must be educational partner.
ACGME	Common Program Requirement II.B.1	Residents have access to adequate resources at all training sites	Multi-site access requirement: creates challenge for traditional campus libraries.

ACGME	Common Program Requirement IV.C	Adequate resources for scholarly activities	GME-specific support requirement: services that school-based libraries may not provide.
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3. Research Methods

This section describes the systematic approach used to develop the mission-driven organizational framework. [11]

3.1. Research Approach

This study adopts a qualitative research approach that integrates systematic literature synthesis, application of organizational theory, thematic analysis, and an iterative process for framework development [52,53]. The research is conducted within a pragmatic paradigm that emphasizes practical usefulness while ensuring analytical rigor [54]. The search strategy includes databases such as PubMed, LISTA, Web of Science, ERIC, and Scopus from 2000 to 2025, along with gray literature from professional organizations [55]. Thematic analysis was performed using Braun and Clarke's method, incorporating both deductive and inductive coding. [56] The framework was developed iteratively through several refinement cycles to meet quality criteria, including comprehensiveness, coherence, utility, transferability, and clarity [57]. Economic analysis was triangulated using salary surveys, institutional reports, and consultations with practitioners. [8]

4. Organizational Models and Mission Alignment Analysis

This section provides a detailed analysis of three main organizational models: independent school-based libraries, integrated university library systems, and hub-spoke distributed models [3,4].

4.0. Comparative Overview: Three Primary Models

Table 5. Organizational Models: Comparative Summary.

Dimension	Independent (School-Based)	Integrated (University Library)	Hub-Spoke (Distributed)
Governance	Reports to Dean of Medical School	Reports through university library administration	Unified governance across distributed locations
Budget Structure	School educational budget	University library allocation with health sciences share	Multiple funding sources pooled
Typical Staffing	6-10 FTE	6-12 FTE health sciences specialists plus shared services	12-18 FTE (6 hub + 7-12 spokes)
Geographic Reach	Single campus concentration	Single campus or limited distribution	System-wide distributed presence

136 refereUME Support	Excellent	Good to Strong	Excellent
GME Support	Weak to Minimal	Weak to Moderate	Excellent
Research Support (Generalist)	Good	Strong	Excellent
Research Support (Specialized)	Limited	Strong to Excellent	Excellent
Clinical Care Support	Weak	Weak to Moderate	Excellent
Implementation Complexity	Low	Moderate	High
Optimal Context	Education-focused, geographically centralized, 300-600 students	Research-intensive universities, multiple health sciences programs, cost efficiency priority	Large geographically distributed AHS, 3+ clinical sites, >1,500 residents/clinicians
Primary Strength	Deep educational integration	Cost efficiency through economies of scale	Comprehensive mission support across distributed geography
Primary Limitation	Cannot sustain specialized services; limited GME/clinical reach	Risk of health sciences focus dilution	Highest organizational investment and coordination complexity

4.1. Independent School-Based Library Model

The independent school-based library model reflects the traditional setup in academic medicine, in which the library operates as a separate administrative unit within the medical school, with the library director reporting directly to the dean. Usually, this model has a director overseeing six to ten full-time professional librarians and support staff, serving a focused community of about 400-600 medical students and 150-200 faculty members, mainly located on a single campus.

From a mission alignment perspective, the independent school-based model strongly supports undergraduate medical education through various interconnected mechanisms [51,59]. Being positioned directly within medical school administrative structures provides natural routes for library involvement in curriculum committees, educational governance, and assessment initiatives [60]. This structural integration fosters proper curriculum integration, enabling information literacy instruction to develop progressively across the four to six years of medical education [61].

The independent model excels at supporting educational missions but has notable limitations in achieving other institutional goals. Research support is generally at a broad level because school budgets usually cannot fund specialized library roles. Support for the clinical mission is even more

challenged, as these libraries often have little to no organizational ties to hospital operations. Additionally, geographic distribution remains a significant obstacle for modern academic health systems, primarily as they increasingly function across multiple clinical locations.

Analysis of the cost structure for a typical independent school-based implementation shows moderate overall costs but relatively high per-person expenses. Personnel costs are approximately \$663,000 to \$917,000 per year for eight full-time staff. Non-personnel expenses range from \$640,000 to \$1,050,000. The total yearly operating costs range from \$1.3 million to \$2.0 million [8].

4.2. Integrated University Library System Model

The integrated university library system model incorporates health sciences library services into overall university library systems rather than treating them as separate school units [4]. Leadership usually involves an Associate University Librarian for Health Sciences, who reports to the university library administration rather than directly to health sciences deans [66].

From a mission alignment standpoint, integrated university library models offer notable benefits for research-oriented missions that need specialized services, which smaller independent libraries are unable to sustain [67]. These university library systems, serving thousands of faculty and students across multiple programs, can financially support specialized roles such as systematic review librarians, data specialists, and scholarly communication experts [68]. Additionally, cost efficiency gained through economies of scale is a significant advantage [69].

However, integrated models encounter notable challenges [70]. The primary issue is the potential dilution of focus on health sciences as library resources are spread across different university groups [71]. Additionally, organizational disconnect from health sciences leadership presents another hurdle [72]. Establishing links to the clinical mission is particularly challenging, as universities often lack direct connections to hospital operations [64].

The integrated model works best when research demands specialized services, cost efficiency is a key strategic focus, multiple health sciences programs are available, and university library systems are firmly committed to health sciences [4]. Its cost structure shows moderate total spending with the lowest per-capita costs. Annual costs range between \$1.4 million and \$2.2 million [8].

4.3. Hub-Spoke Distributed Model

The hub-and-spoke distributed model describes an organizational structure that balances centralized expertise with local access [12,13]. This model includes a central hub where specialized librarians are based, linked to multiple spoke locations where librarians offer local presence [73].

Figure 2 illustrates this architecture, highlighting how the central hub of specialized expertise (such as systematic reviews, informatics, and scholarly communication) connects to various spokes that differ in size and function. The size of each spoke indicates the level of service provided—large spokes at teaching hospitals include embedded librarians, while smaller spokes at outpatient clinics mainly receive virtual support. Bidirectional arrows demonstrate the flow of expertise from the hub to the spokes and the inward flow of complex referrals from spokes back to the hub.

From a mission-alignment perspective, hub-and-spoke models provide comprehensive support across the full range of AHS missions [74]. The hub concentrates rare, expensive expertise, including systematic review specialists, informatics experts, and scholarly communication specialists [75]. Simultaneously, distributed spoke librarians positioned at major clinical sites provide a local, accessible presence [76].

Clinical embedding is possible when librarians are physically present at hospitals [77,78]. Supporting graduate medical education is feasible when librarians at training hospitals establish connections with residency programs [79]. The educational continuum is especially beneficial, as a distributed presence enables monitoring learners across various training stages [14].

However, hub-spoke models present notable challenges. [80] Their implementation requires recruiting multiple spoke librarians, establishing workspaces across various locations, and developing the necessary technology infrastructure. [81] Cost is a key consideration—these models

require the highest overall investment due to distributed staffing, typically 12-18 full-time equivalents (FTE). [8] The initial setup costs range from \$325,000 to \$575,000, while annual operating expenses range from \$2.0 to \$2.9 million. By comparison, maintaining separate libraries at each location would cost \$2.8 to \$4.2 million annually, so hub-spoke models can achieve savings of approximately 30-40%. [82] ROI analysis shows that these models yield an ROI of 1.84-2.14. [83]

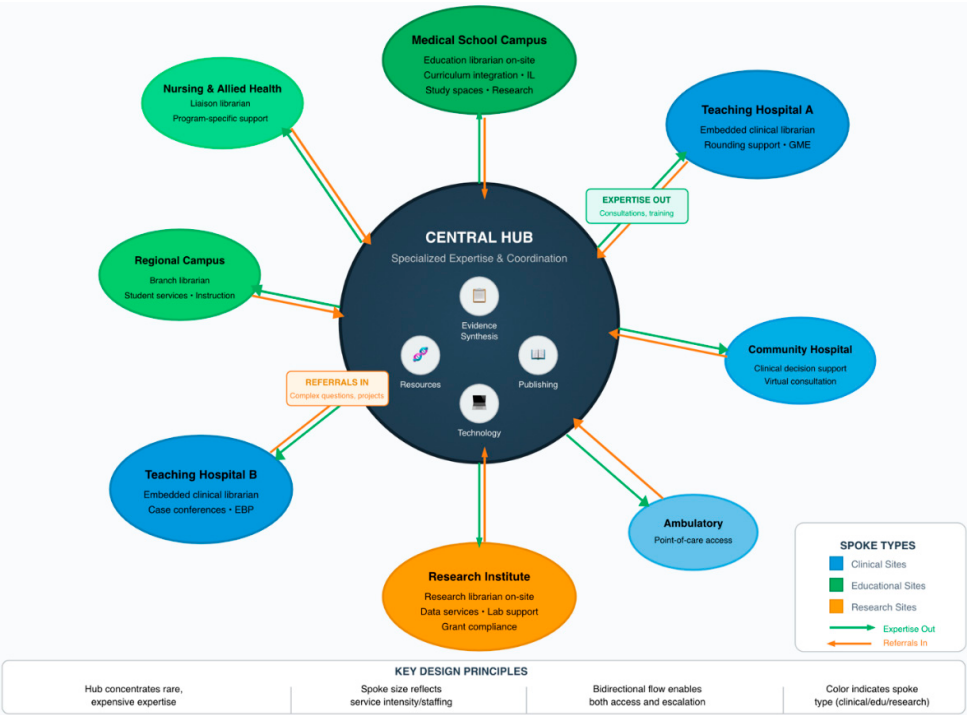


Figure 2. Hub-Spoke Library Organization – Structure and Flow.

5. Service Delivery Across the Educational Continuum

Challenges along the educational continuum demand targeted analysis as developing health professionals become more critical, yet library structures often fragment at phase transitions.

5.1. The Continuum Challenge

Medical education increasingly focuses on a continuous development path from undergraduate medical education (UME) through graduate medical education (GME) to continuing medical education (CME) and lifelong learning. [30] Competency-based education frameworks aim for gradual skill improvement that builds over time. [84] The competencies in evidence-based practice learned during medical school should be further refined during residency and maintained throughout a physician's career. [85] However, library support often breaks apart at transition points, creating gaps where ongoing support is most needed and where continuity is crucial. [14]

Figure 3 depicts this fragmentation using a coverage map that overlays three organizational models along the same continuum, illustrating their distinct outreach levels: independent models (blue) sharply end at the school-hospital governance boundary; integrated models (green) extend further but lessen after training ceases; only hub-spoke models (purple) maintain substantial coverage across the entire continuum. Vertical barriers show where organizational boundaries, not educational principles, lead to support decline.

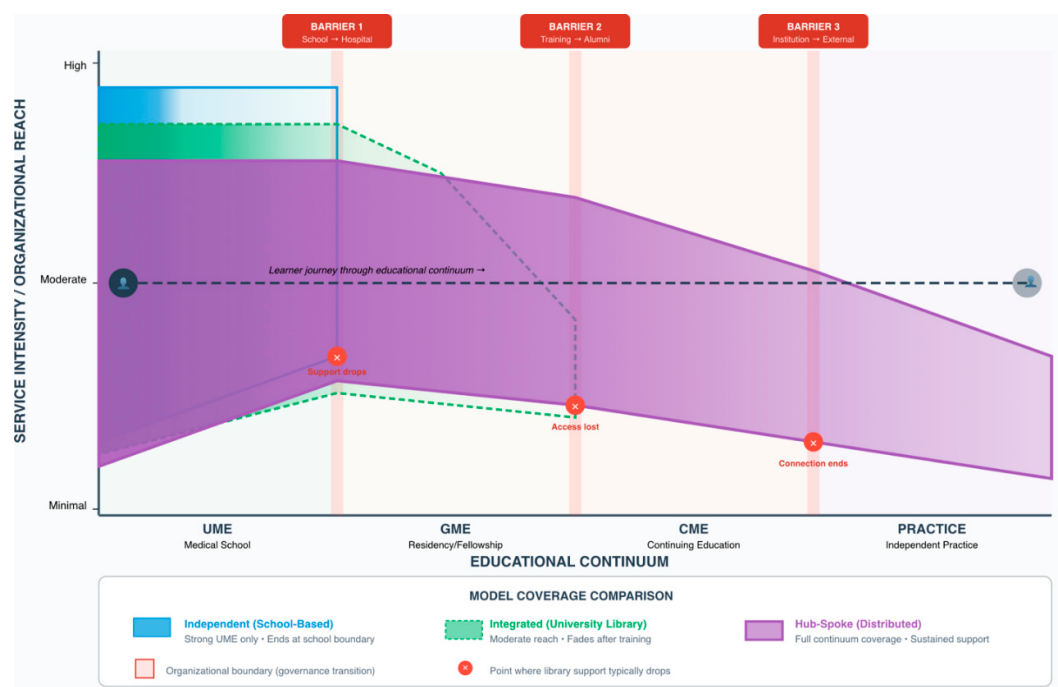


Figure 3. Educational Continuum Coverage by Organizational Model.

5.2. Phase-Specific Characteristics and Support Requirements

Undergraduate medical training occurs within organized curricular frameworks that include clear learning objectives, regular assessments, close faculty supervision, and designated study time [30,86]. Medical students primarily need to gain core knowledge, understand disease mechanisms, and learn to consult evidence regularly [87]. The library's educational role can be formally structured, with librarians providing instructional sessions that are integrated into the curriculum [51,60].

Graduate medical education occurs in fundamentally different contexts. [88,89] Residents take on direct patient care responsibilities under supervision, gradually gaining more autonomy. [90] The schedules are intense, providing little protected time. [91] With training across multiple sites, residents only have brief rotations at the main campus. [92] Their information needs to focus more on immediate clinical concerns. [93]

Continuing medical education and independent practice are even more demanding contexts. [94,95]. Physicians face intense time constraints. [96] They need immediate, specific information. [97] There is a lack of institutional infrastructure that offers protected learning time. [98] Despite this, the need for evidence-based practice remains equally, if not more, critical. [85]

5.3. Organizational Models and Continuum Support

Independent school-based libraries excel at supporting UME but face significant gaps in GME and CME support due to organizational boundaries. [3,62] While integrated university library models can provide a broader range of resources, they encounter similar challenges. [4] Hub-spoke models offer the greatest potential for continuous support, with distributed spoke presence and coordinated hubs ensuring ongoing skill development. [13,74] Nonetheless, establishing continuum support demands planning rather than developing spontaneously. [99]

6. Implementation Framework

Implementation quality frequently has a greater impact than choosing a specific organizational model. [16,100] Here, we offer systematic guidance to support effective organizational transformations. [101]

6.1. Pre-Implementation Assessment

Successful implementation starts with an honest assessment of organizational readiness. [102,103] Leadership capacity and commitment must be evaluated. [104] Stakeholder alignment involves identifying who needs to cooperate. [44] The resource adequacy assessment should determine if funding is available. [105] Cultural readiness examines whether the organizational culture is open to change. [106]

A gap analysis systematically compares the current state with the desired future state. [107] Risk assessment identifies risks across implementation, operational, financial, personnel, and reputational areas. [108]

6.2. Phased Implementation Approach

Implementation occurs through deliberate phases that support learning and adaptation. [16,109] Phase 1, which lasts 3-6 months, involves detailed organizational planning and design. [110] Phase 2, spanning 2-4 months, focuses on recruiting staff and establishing infrastructure. [111] Phase 3, lasting 6-12 months, starts with pilot testing at 1-2 sites. [112] Phase 4, taking 12-24 months, involves expanding and refining efforts to the remaining sites. [113] Finally, Phase 5, also 12-24 months, aims to stabilize and integrate the project into ongoing, sustainable operations. [114]

6.3. Stakeholder Engagement

Stakeholder engagement involves systematically identifying and mapping stakeholders. [44,115] It also requires developing engagement strategies tailored to their levels of power and interest. [116] Implementing various communication channels is essential. [117] To manage resistance effectively, understanding its origins and fostering supportive coalitions is crucial. [118]

6.4. Monitoring and Adaptation

Implementation monitoring involves tracking both process and outcome measures. [119] Feedback loops should be designed for quick responses to critical feedback. [120] When making adaptations, it is important to balance staying true to core principles with making necessary peripheral adjustments. [121]

7. Discussion

7.1. Key Findings

This research establishes five central findings. [122] First, mission-driven organizational design is a foundational principle, positioning organizational structure as a dependent variable determined by mission requirements. [22] Second, context-dependent appropriateness characterizes model selection with no universal optimal model. [27] Third, educational continuum fragmentation persists systematically at transitions. [14] Fourth, economic analysis demonstrates that mission-aligned structures generate favorable ROI. [83] Fifth, implementation quality determines outcomes as much as model selection. [16]

7.2. Theoretical and Practical Implications

This framework offers multiple contributions. [123] Theoretically, it positions mission-driven analysis as a core principle, [23] combines organizational theory with implementation science, [11] and illustrates how to systematically translate hub-spoke principles. [12] Practically, it equips library directors with structured frameworks, [7] helps AHS leadership view organizational structure as a strategic choice, [124] and provides educators and researchers with tools for professional development. [125]

7.3. Limitations

The evidence primarily comprises descriptive accounts rather than controlled comparison studies. [6] Publication bias tends to favor success stories. [48] Geographic concentration creates uncertainty about international applicability. [49] Limited economic data necessitate estimation. [8] Nonetheless, systematic synthesis is a notable advancement despite these limitations. [126]

8. Conclusion

8.1. Central Conclusions

Five central conclusions emerge. [127] Mission-driven design must be established as the foundational principle. [22] Context-dependent appropriateness characterizes optimal model selection. [27] Persistent continuum gaps fragment support at educational transitions. [14] Economic analysis reveals that value considerations should drive decisions. [83] Implementation quality often matters more than model selection. [16]

8.2. Recommendations by Stakeholder Group

Library directors should perform mission-oriented organizational analysis using the provided framework. This approach helps position libraries as essential infrastructure aligned with their mission. They should also focus on designing services that support the entire educational continuum, develop implementation capacity before large-scale changes, and seek collaborative solutions when resources are constrained. [7,128]

Academic health system leadership should view the library's organizational structure as a strategic decision that impacts mission success. They should base resource allocation on value creation rather than just minimizing costs, facilitate ongoing support through cross-boundary coordination, allocate sufficient resources for implementation, and assess effectiveness using outcome metrics aligned with institutional priorities. [124,129]

Educators and researchers ought to integrate organizational analysis frameworks into professional training, perform empirical validation studies, create economic valuation techniques, consider international transferability, and support wider organizational scholarship. [125,130]

Professional associations ought to strengthen accreditation standards that promote continuous development, develop resource repositories, lobby for funding policies, broaden workforce development programs, and support international knowledge exchange. [131]

8.3. Call to Action and Final Reflections

Frameworks by themselves do not generate change. Successful implementation demands institutional resolve to strive for organizational excellence with dedication and rigor. An organization's structure reflects its core values. Libraries positioned as strategic assets demonstrate a genuine commitment to evidence-based excellence. Academic health systems dedicated to excellence need to acknowledge libraries as vital institutional resources and allocate appropriate investments [132–136].

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