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Review

Exploration and Strategic Analysis of the "One Hospital, Multiple Campuses" Outpatient Homogenized Management Model

Rongrong Yu*

Department of Urology, Shandong First Medical University Affiliated Provincial Hospital, Jinan 250000, China.

Abstract

Against the backdrop of rapid socioeconomic development and continuously rising public health demands, optimizing and efficiently leveraging medical resources has become a critical challenge for the healthcare sector. In this context, the "one hospital, multiple campuses" model has emerged as an innovative development strategy, aiming chiefly to broaden the geographic reach of medical services and strengthen the overall competitiveness of hospital systems. However, while multi-campus operations introduce new growth opportunities, they also give rise to substantial obstacles in achieving consistent, high-quality outpatient services across all locations. As the primary point of contact between hospitals and patients, the uniformity of outpatient service quality and management not only directly impacts patient welfare but also plays a decisive role in shaping institutional reputation. Taking a large, comprehensive hospital as a case study, this paper conducts an in-depth analysis of the current status of outpatient homogenization under the "one hospital, multiple campuses" arrangement, identifies practical management models, and formulates highly targeted strategic recommendations. These measures aim to elevate outpatient service quality uniformly across all campuses and promote a more balanced allocation of medical resources.

Keywords: One hospital, multiple campuses; outpatient homogenization management; management model; strategic analysis

1 Introduction

In recent years, accelerating urbanization has dramatically altered population distribution patterns, leading to increasingly diverse medical needs across different regions. To adapt to this trend, many large hospitals have proactively established branch campuses or entered into hospital management agreements, gradually constructing a "one hospital, multiple campuses" framework. This approach not only expands institutional scale advantages and enhances brand influence but also facilitates the integration of dispersed medical resources, allowing patients to access more convenient and comprehensive care over a wider area [1]. Nevertheless, in the day-to-day operation of multiple campuses, differences in geographic location, staffing arrangements, and equipment configurations have led to considerable variability in outpatient service quality and management. As the initial entry point for patients seeking care, outpatient services must be standardized — or homogenized — to maintain patient trust and satisfaction. Therefore, devising an outpatient homogenization management system tailored to the "one hospital, multiple campuses" paradigm has become a pivotal challenge in modern hospital administration.

2 Current Status Analysis of Outpatient Homogenization Management under a "One Hospital, Multiple Campuses" Framework

2.1 Overview of Outpatient Development across Campuses

Consider a large, general hospital that has evolved into a "one main campus, two branch campus" structure. The main campus, situated in the urban core, has developed over many years into a comprehensive center for clinical care, teaching, and research. It boasts a full complement of specialties, numerous renowned experts,

***Correspondence**
Rongrong Yu
Department of Urology, Shandong First Medical University Affiliated Provincial Hospital, Jinan 250000, China.
E-mail: 15165182270@163.com

and state-of-the-art medical equipment, handling several thousand outpatient visits per day. By contrast, the two branch campuses — located respectively in the eastern and western districts of the city — were established primarily to better serve local residents. One branch focuses on specialty-driven care, maintaining high technical standards and reputation in several key disciplines; the other branch emphasizes comprehensive services, offering multiple specialties under one roof to deliver a one-stop outpatient experience for common and complex health needs.

2.2 Current State of Homogenization Management

2.2.1 Institutional Framework

The main campus has, through long-term practice and continuous refinement, developed a thorough set of management protocols covering key areas such as outpatient registration procedures, diagnostic and treatment standards, and quality-monitoring mechanisms. While these protocols have been partially rolled out to the branch campuses, significant discrepancies arise in actual implementation. Some branches — constrained by smaller scale or unique service profiles — interpret and apply the centralized rules unevenly. For example, the main campus employs a time-slot reservation system that allows patients to select appointments flexibly and substantially reduces waiting times. Yet, due to limitations in digital infrastructure and staff training, certain branch campuses still rely on traditional on-site queuing for registration, resulting in longer waits and diminished patient experience [2].

2.2.2 Personnel Management

Staffing patterns reveal marked imbalances. The main campus possesses a large, highly experienced clinical workforce whose members regularly participate in national and international training and academic exchanges, quickly assimilating cutting-edge medical techniques and concepts. In contrast, branch campuses tend to rely on younger, less experienced teams, with fewer opportunities for advanced training due to factors such as geographic remoteness and lesser brand prestige. Moreover, mechanisms for rotating staff and fostering inter-campus collaboration remain underdeveloped [3]. Senior specialists from the main campus seldom conduct regular clinics at branch sites, and branch-campus staff have limited access to complex case discussions and surgical training at the main site, exacerbating inter-campus skill disparities.

2.2.3 Medical Quality

Although all hospital campuses rigorously adhere to the same standardized clinical protocols, variations in factors such as the sophistication of medical equipment and the professional expertise of healthcare personnel give rise to measurable disparities in care quality. By using the diagnostic accuracy of a common disease as an objective performance metric, one can directly compare the Main Campus with its branch facilities, as illustrated in Table 1.

Table 1. Diagnostic Accuracy for a Common Disease by Campus

Campus	Number of Cases	Number of Correct Diagnoses	Diagnostic Accuracy (%)
Main Campus	500	460	92%
Branch Campus A	300	255	85%
Branch Campus B	350	294	84%

From Table 1, it is clear that the Main Campus achieves a substantially higher diagnostic accuracy (92%) for this condition compared with Branch Campus A (85%) and Branch Campus B (84%). Moreover, the branch campuses occasionally experience adverse safety events — such as medication errors and perioperative complications — which points to residual vulnerabilities in their patient-safety management systems. These shortcomings may stem from relatively outdated diagnostic and therapeutic equipment at the branches, less extensive clinical experience among their medical staff, and the absence of sufficiently robust mechanisms for continuous quality monitoring and improvement.

2.2.4 Patient Satisfaction

Patient surveys indicate that satisfaction levels at the main campus remain high across dimensions such

as outpatient environment comfort, staff courtesy, and clinical expertise. By contrast, branch campuses report lower satisfaction, with primary complaints centered on lengthy waiting times and perceived gaps in clinical proficiency. Many patients express that they sometimes spend an entire day completing the outpatient process at a branch and, for complex cases, prefer traveling to the main campus for care.

2.3. Key Challenges

2.3.1. Coordination Complexity

The geographic dispersion inherent in a multi-campus layout elongates management chains, causing information delays and distortions and substantially raising coordination difficulty [4]. Over time, each campus develops its own organizational culture, triggering resistance and implementation barriers when attempting to enforce homogenized policies. Moreover, the absence of streamlined communication channels for cross-campus affairs necessitates multiple layers of approval, undermining efficiency.

2.3.2 Imbalanced Resource Allocation

Medical devices, pharmaceuticals, and other critical resources are disproportionately concentrated at the main campus. Branch campuses often lack advanced diagnostic equipment — such as cutting-edge MRI or high-throughput laboratory analyzers — and must transfer complex cases back to the main site, increasing patient time and financial burdens. In drug procurement, the main campus can swiftly incorporate novel therapies, whereas branches face procurement delays and inventory constraints, hampering treatment efficacy [5].

2.3.3 Disparity in Staff Competence

As noted, divergent levels of staff expertise across campuses impede uniform service delivery and slow the dissemination of new medical techniques and programs [6]. Branch sites, limited by personnel and technology bottlenecks, struggle to synchronize with the main campus's rapid adoption of innovations, perpetuating inter-campus discrepancies.

2.3.4 Lagging Information Systems

Several branch campuses operate outdated or incompatible information platforms, preventing seamless data exchange. Patients must complete separate registration, billing, and result retrieval processes at each site, forfeiting the benefits of an integrated "one-card" system. Clinicians bear increased administrative burdens as they manually navigate disparate systems to compile patient histories, raising the risk of oversight and error. Furthermore, inadequate real-time outpatient monitoring impedes swift identification and resolution of service deficiencies.

3 Exploration of an Outpatient Homogenization Management Model under a "One Hospital, Multiple Campuses" Framework and Strategies for Optimization

3.1 Establishing a Unified Administrative Structure

To serve as the central decision-making body for outpatient homogenization across multiple campuses, a "Committee for Outpatient Homogenization Management" should be convened, comprising hospital leadership and the outpatient directors from each campus. This committee will bear responsibility for formulating standardized outpatient management policies, service benchmarks, and performance-evaluation mechanisms, as well as for clearly delineating the specific duties and targets of each campus in outpatient administration. It should convene regular meetings to diagnose issues arising in multi-campus outpatient management, devise corrective action plans, and coordinate inter-campus resource allocation and operational deployment. For example, in drafting the annual outpatient workplan, the committee will assess each campus's current throughput and strategic priorities, then allocate medical resources and service objectives in a scientifically justified manner to ensure consistent progress across all sites.

Each campus must also establish an Outpatient Management Office responsible for day-to-day operations and directly reporting to — and supervised by — the central committee. This office will rigorously implement the committee's unified policies and standards, organize internal quality audits and service-level assessments to identify and resolve procedural bottlenecks [7], and serve as the liaison for ongoing communication with the central administration and other campuses. By enshrining this tiered governance framework, the hospital can ensure that homogenization initiatives are effectively executed and that vertical and horizontal coordination proceeds seamlessly.

3.2 Standardization of Institutional Protocols

3.2.1 Outpatient-Process Standardization

Standardize and integrate every step of the outpatient journey — registration, consultation, diagnostics,

and medication dispensing — by defining precise time-and-service criteria for each phase. For instance, specify exact registration windows, consultation-queue protocols, and time slots for diagnostic appointments to reduce patient wait times. Deploy an information-management platform that automates registration, payment, and diagnostic scheduling, enabling patients to book appointments via mobile app or self-service kiosks. The system will dynamically display each department's remaining slots and estimated wait times, empowering patients to plan effectively. Clinicians will use an electronic medical-record system to access patients' histories and test results instantly, expediting diagnostic decisions and treatment plans. Diagnostics and lab results can be scheduled and retrieved online, obviating lengthy in-hospital waits. An intelligent dispensing machine will accelerate and improve the accuracy of medication delivery [8].

3.2.2 Medical-Quality Standardization

Develop a unified quality-assessment framework that sets rigorous benchmarks for outpatient record-keeping, diagnostic accuracy, and the scientific validity of treatment plans. Establish a network of quality monitors to conduct regular, randomized audits of outpatient charts at each campus, scoring them on standardization, completeness, and correctness. Link audit outcomes directly to departmental and individual performance evaluations. Implement continuous monitoring of diagnostic accuracy rates, providing targeted training and mentoring for clinicians whose accuracy falls below acceptable thresholds. Introduce a multidisciplinary case-review mechanism wherein complex cases are evaluated jointly by specialists from multiple departments, ensuring that each patient receives a tailored, evidence-based treatment strategy.

3.2.3 Service-Standard Standardization

Institute clear guidelines for staff appearance, communication scripts, and courtesy standards [9]. Offer dedicated training sessions on professional etiquette to reinforce empathy and effective dialogue. For example, publish a communication-style handbook specifying polite phrases and forbidden language when interacting with patients. Require staff to greet patients with a smile, proactive salutations, attentive listening, and thorough explanations. Establish a patient-feedback and complaint-resolution mechanism to ensure timely response to concerns, using each incident as a learning opportunity to refine service quality. Clinicians or support staff with high complaint rates will receive one-on-one coaching and, if necessary, corrective performance interventions.

3.3 Unified Training and Exchange Programs

3.3.1 Professional-Skills Training

Design role-specific curricula tailored to each clinical cohort's needs. For physicians, regularly invite leading domestic and international experts to deliver lectures and case-study workshops on cutting-edge techniques and recent research developments, and facilitate their attendance at major conferences and advanced courses. Organize hands-on workshops to reinforce procedural and emergency-response skills. For nursing staff, focus on refining core competencies — such as precise intravenous access and advanced wound care — and provide specialized leadership training for nurse managers to cultivate their administrative and supervisory capabilities [10].

3.3.2 Service-Etiquette Training

Engage professional etiquette trainers to deliver comprehensive instruction on grooming, demeanor, and communication artistry. Use immersive methods — role-play simulations and scenario-based exercises — to help staff internalize and execute service protocols, thereby strengthening patient rapport. For instance, train personnel on standard postures (e.g., standing at attention, sitting with poise, walking confidently) and on deploying appropriate verbal and nonverbal cues during patient interactions.

3.3.3 Communication-Skills Training

Develop targeted workshops that teach active listening, empathetic engagement, and clear expression strategies. Employ case-analysis discussions and collaborative small-group exercises to help staff recognize varying patient psychologies and adapt their communication accordingly — for example, calming anxious patients through reassurance techniques and demystifying treatment rationales in lay terms for those with reservations.

3.3.4 Inter-Campus Exchange Mechanism

Promote systematic staff rotations among campuses by defining rotation periods, role assignments, and evaluation criteria. During their placements, personnel must abide by the host campus's policies and undergo its performance reviews. Upon rotation completion, they submit a detailed report outlining insights and recommendations. These exchanges enable cross-pollination of best practices: senior specialists from the main campus can introduce advanced management approaches and clinical innovations at branch sites, while branch-campus staff gain exposure to complex case management

and high-volume workflows at the main campus, thereby enhancing overall competence and fostering institutional cohesion [11].

3.4 Coordinated Allocation of Medical Resources

3.4.1 Equipment Management

Create a centralized equipment registry noting each campus's inventory, model specifications, and operational status. Allocate devices — particularly large, high-cost instruments — based on actual service demand, preventing underuse or bottlenecks. Implement a cross-campus reservation system for shared assets (e.g., MRI scanners, linear accelerators), with use slots coordinated by a dedicated resource-planning office and scheduled in accordance with patient appointments. Enforce a rigorous maintenance program, including periodic performance testing and calibration, and establish rapid-response protocols for equipment repairs to minimize downtime and safeguard continuity of care.

3.4.2 Pharmaceutical Management

Form a unified procurement and distribution center responsible for negotiating volume discounts with suppliers, thus reducing overall drug expenditures [12]. Standardize formulary composition and quality across all campuses, ensuring consistency of medication availability. Deploy an intelligent inventory-management system that tracks stock levels in real time and triggers inter-campus transfers when thresholds are reached, guaranteeing uninterrupted supply. Simultaneously, monitor prescribing patterns to curb overuse and waste at the source.

3.5 Enhancing Information-Technology Infrastructure

3.5.1 Patient-Service Informatization

Develop an integrated registration platform accessible via a mobile app, WeChat official account, and the hospital website, allowing patients to select their preferred campus, department, and physician. The platform should display each site's live appointment availability and queue lengths, enabling patients to plan optimally. Implement a comprehensive patient-information system that consolidates medical records, test results, and visit histories across all campuses [13], so that clinicians can retrieve a patient's full history at any location, thereby supporting accurate, personalized care. Offer online test-result portals so patients can view their reports instantly without returning to the hospital.

3.5.2 Medical-Management Informatization

Leverage IT solutions for real-time monitoring of the entire outpatient workflow. Build an intelligent dashboard that tracks key metrics — registration wait times, consultation durations, diagnostic turnaround, and dispensing speed — across campuses. When performance thresholds are exceeded (e.g., wait times cross acceptable limits), automated alerts notify management to intervene promptly [14]. Complement this with big-data analytics to dissect chart-quality, diagnostic precision, and treatment efficacy, providing evidence-based insights for continuous improvement.

3.5.3 Telemedicine Informatization

Utilize telemedicine platforms to facilitate remote consultations, diagnoses, and training across campuses. For complex or rare cases, main-campus specialists can connect via real-time video links with branch-campus physicians to discuss patient findings and collaboratively formulate treatment plans, thereby improving diagnostic accuracy and therapeutic outcomes. Branch campuses can upload imaging and laboratory data to a secure tele-diagnostic portal for expert interpretation and rapid feedback. Additionally, employ remote-learning modules — webinars, case conferences, and virtual grand rounds — to disseminate high-quality educational content widely, elevating clinical proficiency and fostering a culture of shared expertise.

4 Implementation Evaluation and Continuous Improvement

4.1 Implementation Evaluation

To comprehensively assess the effectiveness of the "one hospital, multiple campuses" outpatient homogenization management model, a systematic evaluation should be conducted across the following dimensions:

4.1.1 Medical Quality Metrics

To evaluate the impact of homogeneous management on healthcare quality, we compared key performance indicators across all hospital branches before and after its implementation [15]. Table 2 presents the mean values of outpatient diagnostic accuracy, medical error rate, and patient cure rate, along with their respective trends and magnitudes of change. This allows for a precise assessment of how the management model influenced each metric.

Table 2. Changes in Key Clinical Indicators Before and After Homogenization

Indicator	Pre-implementation (Branch Mean)	Post-implementation (Branch Mean)	Trend	Magnitude of Change
Outpatient diagnostic accuracy	85%	92%	Significant increase	7%
Medical error rate	3%	1.2%	Substantial decrease	1.8%
Patient cure rate	70%	78%	Noticeable increase	8%

From the data in Table 2, it is evident that the adoption of a homogeneous management model resulted in a marked improvement in outpatient diagnostic accuracy (rising from 85% to 92%), a significant reduction in medical error rate (falling from 3% to 1.2%), and a notable increase in patient cure rate (from 70% to 78%). These outcomes demonstrate that homogeneous management has played an active and effective role in enhancing overall medical quality.

4.1.2 Service Efficiency Indicators

Evaluate changes in key service-efficiency metrics across campuses. Prior to homogenization, patients waited an average of 30 minutes for registration, 60 minutes to see a physician, and often waited up to three days for certain laboratory or imaging results. Following process optimization and bolstered information-technology support, average registration wait times fell to approximately 10 minutes, average physician-waiting times declined to around 30 minutes, and most test results became available the same day. This uplift in service efficiency has tangibly improved the outpatient experience.

4.1.3 Patient Satisfaction Scores

Gather extensive patient feedback via questionnaires and telephone follow-ups, evaluating satisfaction across dimensions such as facility environment, staff courtesy, clinical competence, and procedural convenience. Before homogenization, overall satisfaction averaged 78%; afterward, it rose to 88%, with each sub-dimension showing measurable gains. This trend indicates growing patient approval of the standardized outpatient services.

4.1.4 Economic Performance Metrics

Analyze economic indicators — such as outpatient revenue, operating costs, and profit margins — before and after homogenization. Although financial gain is not the primary goal of clinical homogenization, more efficient resource utilization and higher patient throughput naturally contribute to improved economic outcomes. Post-implementation, campuses report revenue growth, better cost control, and higher profit margins, evidencing simultaneous social and financial benefits.

4.2 Continuous Improvement Strategies

4.2.1 Regular Evaluation and Feedback

Institute a quarterly evaluation cycle led by the Outpatient Homogenization Management Committee. Employ a mixed-methods approach — data analytics, on-site observations, and satisfaction surveys of both patients and staff — to collect comprehensive performance insights. Upon completion, immediately disseminate evaluation results to each campus, highlighting identified deficiencies and recommending targeted corrective actions.

4.2.2 Dynamic Adjustment of Management Policies

Use evaluation findings and evolving institutional needs to adapt homogenization strategies in real time. For instance, when a particular protocol proves impractical in execution, convene expert panels to revise and refine it. If a campus develops new resource requirements, promptly reallocate funding or equipment to address those needs. Maintain vigilance regarding emerging healthcare trends and regulatory shifts, integrating new standards and innovations into the homogenization framework to ensure its ongoing relevance and flexibility.

4.2.3 Enhanced Experience Sharing and Learning

Promote inter-campus knowledge exchange to disseminate best practices and successful interventions [16]. Organize periodic on-site benchmarking visits, cross-campus seminars, and case-sharing workshops to facilitate peer learning. Additionally, deepen collaborations with leading domestic and international hospitals,

absorbing their cutting-edge approaches to multi-campus management and outpatient standardization. This continual cross-pollination of ideas will sustain momentum in service quality and operational efficiency improvements.

5 Conclusion

In summary, the "one hospital, multiple campuses" outpatient homogenization management model has demonstrated significant success in elevating medical quality, streamlining service efficiency, boosting patient satisfaction, and enhancing economic performance. By establishing a unified governance structure, standardizing clinical and administrative protocols, delivering coordinated staff training and exchanges, optimizing resource allocation, and accelerating information-technology integration, hospitals can construct a robust homogenization framework that drives sustained, systemic benefits. Looking ahead, as technology evolves and management practices mature, this model will continue to refine its capabilities, offering patients increasingly high-quality, efficient care and underpinning the stable development of modern healthcare systems.

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The authors declare no conflicts of interest.

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Supplementary Materials

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