

Research Article

Employee Competency Development Strategies for Improving Organizational Performance at Pertamina Balikpapan Hospital

Lita Ripiani^{1*}, Edi Sugiono², Irma Setyawati³

¹Doctoral Student in Management and Lecturer in the Department of Management, Faculty of Economics and Business, Universitas Nasional Jakarta; Indonesia; email: litadaffa00000@gmail.com

²Department of Management, Faculty of Economics and Business, Universitas Nasional Jakarta; Indonesia; email: edi.sugiono@civitas.unas.ac.id

³Department of Management, Faculty of Economics and Business, Universitas Nasional Jakarta; Indonesia; email: irmasetyawati@civitas.unas.ac.id

*Corresponding Author: litadaffa00000@gmail.com

Abstract: Hospital employee competency development should be positioned as a strategic investment that connects individual capacity with service quality, patient safety, process efficiency, and organizational sustainability. This article analyzes competency development needs and formulates strategies applicable to Pertamina Balikpapan Hospital. The study employed a descriptive approach through a literature study and document review. The materials included national and international scientific articles, regulations, accreditation standards, books, corporate reports, and official websites published from 2022 to 2026. Data were examined using thematic content analysis through evidence grouping, organizational-needs mapping, strategy formulation, and evaluation-indicator development. The findings indicate that competency development should operate as an integrated cycle comprising job-based competency architecture, gap analysis, individual development plans, blended learning, simulation-based practice, coaching, mentoring, job rotation, digital competency strengthening, integration with performance and career management, and impact evaluation extending to organizational results. The strategy is organized into a three-stage road map covering foundation building, expansion and integration, and analytics-based optimization. Success should be measured through behavioral change, standards compliance, patient-safety indicators, patient experience, productivity, and succession readiness. The article concludes that Pertamina Balikpapan Hospital requires needs-based, interprofessional, documented competency-development governance directly connected to quality objectives. The proposed model provides an operational foundation for transforming training activities into measurable and sustainable drivers of organizational performance.

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1. Introduction

Hospitals are service organizations that depend heavily on the quality of human judgment. Diagnostic technologies, therapeutic devices, information systems, and clinical procedures produce benefits only when used by employees with appropriate knowledge, skills, attitudes, authority, and professional discipline. Minor errors in patient identification, handover communication, medication administration, infection control, or data management can cause serious clinical and organizational consequences. Employee competency development therefore cannot be treated as an administrative activity completed when a training certificate is issued. It should function as a system that guides work behavior, protects safety, strengthens coordination, and supports the achievement of hospital strategic objectives. Changes in the healthcare environment increase this urgency. Patients increasingly expect rapid, safe, integrated, transparent, and personalized services. Hospitals face advances in medical technology, electronic medical records, health-data integration, demanding accreditation, provider competition, and cost pressure. Law of the Republic of Indonesia Number 17 of 2023 and Government Regulation Number 28 of 2024 position health-human-

resource quality as essential to health administration. Regulation of the Minister of Health Number 13 of 2025 further covers planning, procurement, utilization, quality improvement, and welfare. The 2024 Hospital Accreditation Standards confirm the relationship between governance, clinical quality, patient safety, and human-resource capability. Accreditation status must be sustained through everyday practice, audits, incident learning, credentialing, performance evaluation, and continuous improvement. The official Balikpapan City Health Service Information System identifies Pertamina Balikpapan Hospital as a class C hospital with the highest, or *paripurna*, accreditation status. Its services include outpatient and inpatient care, an emergency department, medical check-ups, home care, laboratories, radiology, magnetic resonance imaging, a hyperbaric chamber, hemodialysis, extracorporeal shock wave lithotripsy, endoscopy, computed tomography scanning, cardiac and diabetes centers, pharmacy services, and intensive care. This service diversity creates different clinical, managerial, digital, safety, communication, and customer-service competency requirements across positions (Dinas Kesehatan Kota Balikpapan, 2026). Pertamina Balikpapan Hospital is part of the PT Pertamina Bina Medika Indonesia Healthcare Corporation ecosystem, which broadens the need for competency alignment. The corporate sustainability report identifies employee-capacity improvement as a key driver of growth and sustainable performance. In 2023, the company reported 70 education and training programs involving 9,165 participants, at a cost of IDR 9.4 billion. The increase in expenditure was primarily associated with leadership programs and health-worker competency certification. These group-level data demonstrate a commitment to learning. The subsequent challenge is ensuring that educational investment produces behavioral change, improved quality, greater productivity, and a better patient experience in every hospital unit, including Pertamina Balikpapan Hospital. The literature shows that competency is closely associated with performance, although the relationship is not automatic. The systematic review by Krijgsheld et al. (2022) explains that health-worker performance is influenced by organizational, management or team, and individual factors. Training contributes to performance when supported by organizational structure, leadership, resources, role clarity, culture, and working conditions. Walidah et al. (2024) found a relationship between competency and nurse performance. Febrina et al. (2024) demonstrated the effect of competency on performance through job satisfaction, while Mulyani et al. (2024) found that competency influenced service quality through nurse performance. Conversely, Rusmawati et al. (2023) reported that competency had no significant effect in their study setting, while workload exerted a stronger influence. These differences confirm that development programs cannot be limited to increasing knowledge. Organizations must provide opportunities for application, supervisory support, reasonable workloads, adequate tools, and appropriate outcome measures.

A recurring problem in hospital human-resource development is the dominance of an activity-based approach. Success is measured by participant numbers, instructional hours, budget absorption, or certificates issued. These measures are useful for administration, but they do not determine whether employees perform tasks more safely, service time decreases, procedural compliance improves, or patient complaints decline. Nitasari & Rachmawati (2024) found that employee-development planning in the hospital they studied did not clearly describe performance targets, educational support was uneven, and coordination among units remained weak. These findings warn other organizations that education and training should begin with a needs analysis and conclude with an impact evaluation. Previous studies have frequently focused on one profession, one competency category, or the statistical effect of competency on performance. Less attention has been given to an organizational strategy that integrates clinical and nonclinical competencies, unit needs, workplace learning, digital systems, career paths, leadership, performance evaluation, and quality indicators. Publicly available studies specific to Pertamina Balikpapan Hospital remain limited. This limitation makes the development of an evidence-based model important as a preliminary step before conducting an internal assessment. This study addresses two questions. First, what strategic employee-competency development needs should be addressed to support organizational performance at Pertamina Balikpapan Hospital? Second, what strategy, implementation stages, governance arrangements, and evaluation indicators are appropriate for the hospital? The study aims to analyze competency-development needs and formulate an implementation model linking employee capacity with quality, patient safety, patient experience, efficiency,

innovation, and organizational sustainability. Its contribution is a three-year operational framework that can be tested, adapted, and refined using internal data.

2. Literature Review

Employee competency and development

Competency describes an integrated ability to perform work according to established standards. Its elements include knowledge, skills, attitudes, professional judgment, ethical values, and observable behavior. Competency differs from knowledge alone because it must be demonstrated in work activities. An employee may understand a patient-identification procedure but cannot be considered competent if verification is not applied consistently during busy service conditions. This distinction makes behavioral assessment and work outcomes inseparable from development. The World Health Organization (2022) global competency framework for universal health coverage groups health-worker capabilities into six domains: people-centeredness, decision-making, communication, collaboration, evidence-informed practice, and personal conduct. These domains show that hospital competency extends beyond professional technical skills. Employees require therapeutic communication, interdisciplinary coordination, the ability to interpret evidence, safety awareness, and ethical behavior. The global competency and outcomes framework for essential public-health functions further supports the alignment of education with job and service-system requirements (World Health Organization, 2024a). Within human-resource management, competency development is a planned process for closing the gap between required and actual capability. Armstrong & Taylor (2023) position human development within a management architecture aligned with strategy. Noe (2023) explains that effective training requires needs analysis, instructional design, transfer support, and evaluation. A sound program therefore begins by examining the performance problem, target group, behavior that must change, and workplace conditions influencing the application of learning.

The competency-based human-resource management approach uses competency profiles as the foundation for recruitment, placement, development, performance appraisal, career management, and succession. It helps organizations maintain consistency across functions. If collaborative communication is identified as essential for unit heads, it must appear in selection criteria, development modules, behavioral assessments, and promotion decisions. Disconnection among these processes reduces competencies to a normative list with little practical influence. Employee development can occur through formal education, classroom training, e-learning, simulation, case discussion, coaching, mentoring, job rotation, project assignments, clinical audits, morbidity and mortality conferences, peer learning, and incident reflection. Sultan et al. (2025) show that competency-based education emphasizes demonstrable outcomes and the transfer of learning into practice. Giovanelli et al. (2024) affirm that the effectiveness of healthcare management training depends on content relevance, program design, participant characteristics, organizational support, and opportunities to apply learning. Development methods should consequently be selected according to the capability being developed rather than organizer habit.

Individual and hospital organizational performance

Individual performance in healthcare includes several dimensions. Krijgsheld et al. (2022) classify these as task performance, contextual performance, adaptive performance, and counterproductive work behavior. Task performance concerns the quality of core-duty execution. Contextual performance covers cooperation, assistance to colleagues, communication, and contributions to the work environment. Adaptive performance reflects an ability to respond to new technologies, procedures, cases, and pressures. The final dimension concerns behavior harmful to the organization, including noncompliance, resource misuse, or actions that compromise safety. Hospital organizational performance results from the aggregate and interaction of many roles. It cannot be reduced to revenue or patient-visit volume. Hospitals must consider clinical quality, patient safety, regulatory compliance, waiting time, productivity, patient experience, cost efficiency, employee well-being, innovation, and reputation. Individual performance contributes to these outcomes through causal chains. Communication competency influences handover quality; handover quality affects the risk of information loss; that risk affects patient safety. Digital competency influences recording accuracy, which subsequently affects continuity of care, claims processing, and management

decisions. The competency-performance relationship is systemic. Trained employees may still fail to apply their skills when standards are unclear, workload is excessive, equipment is unavailable, supervisors provide no feedback, or unit culture tolerates deviation. Krijgsheld et al. (2022) place organizational structure and culture at the macro level, manager and team support at the meso level, and education, motivation, role clarity, and individual characteristics at the micro level. This three-level framework helps prevent the tendency to blame individuals for problems rooted in system design. Patient safety provides the clearest example of this relationship. Rachmawati et al. (2023) explain that safety requires standards, leadership, reporting, learning, and health-worker involvement. Prasetyo (2024) found that patient-safety competency, management support, communication, motivation, and facilities influence safety activities and nurse-performance assessment. Training should therefore be connected to incident reporting, risk identification, procedural compliance, and corrective follow-up. Without organizational mechanisms, safety knowledge may remain theoretical.

Previous research and the research gap

Indonesian studies provide strong support for competency development while revealing variation in results. Astuti et al. (2022) demonstrated the effectiveness of service-excellence training in improving nurse performance. Walidah et al. (2024) found a significant relationship between competency and nurse performance. Febrina et al. (2024) explained the path through which competency affects job satisfaction, while Mulyani et al. (2024) showed that competency affects service quality through performance. Patrick et al. (2025) identified communication, empathy, basic medical knowledge, continuing training, information systems, and quality based evaluation as components of a hospital customer-service development strategy. Rusmawati et al. (2023) reported a different result: competency had no significant effect on nurse performance in their study setting, while workload was more prominent. This difference is important because it discourages oversimplification. Competency is a prerequisite for performance, but its influence depends on opportunities for application, working conditions, support, motivation, and measurement quality. Employee development should therefore be combined with process improvement, workload management, facility availability, and unit leadership.

Kakemam & Liang (2023) found substantial variation in how healthcare organizations identify and develop managerial competencies and recommended aligning methods with the intended purpose of a competency framework. Mills et al. (2023) showed that competency analysis can strengthen workforce evaluation and planning. Nassar et al. (2024) demonstrated that training can improve infection-prevention and control knowledge, attitudes, and practices. Alotaibi et al. (2025) found a clear relationship between training interventions and improved health-worker digital competency, while identifying resource, support, infrastructure, and change-readiness barriers. The research gap lies in the limited number of models that fully connect competency-analysis findings with organizational objectives. Some studies end with relationships among variables; others address only one program category. This article addresses the gap through a development model integrating job mapping, strategic priorities, learning design, workplace transfer, performance and career integration, learning analytics, and outcome evaluation. The model is directed toward Pertamina Balikpapan Hospital as a service organization with diverse professions and services.

3. Research Method

This study used a descriptive approach based on a literature study and document review. The approach was selected because the article develops a preliminary diagnosis and strategic design from available evidence rather than testing causal relationships with employee data from Pertamina Balikpapan Hospital. Units of analysis included concepts, findings, policies, practices, and indicators related to employee competency, learning, health-worker performance, hospital quality, patient safety, digital transformation, and human-resource governance. Research materials were selected using four criteria. First, sources were published from 2022 to 2026. Second, they were directly relevant to competency development, performance, healthcare organizations, or Pertamina Balikpapan Hospital characteristics. Third, each source could be traced through a DOI, publisher page, journal page, or official website. Fourth, priority was given to peer-reviewed scientific articles, national regulations, World Health Organization documents, PT Pertamina Bina Medika IHC reports, the

Balikpapan City Government healthcare-facility profile, and books issued by verifiable publishers. The search used Indonesian and English keyword combinations covering employee competency, hospital performance, human-resource development, health-worker training, health-workforce competency, job performance in healthcare, management training, digital readiness, and patient-safety competency. Initial sources were screened by title and abstract. Selected sources were examined in their methods, findings, discussion, and publication metadata. DOI links and official web pages were verified to minimize reference-identification errors. Analysis was conducted in five stages. First, information was extracted into categories covering competency concepts, performance determinants, development methods, learning-transfer factors, and outcome measures. Second, the needs of Pertamina Balikpapan Hospital were mapped from the hospital class, accreditation status, service range, regulatory direction, digital transformation, and group-level development policies. Third, evidence was grouped into strengths, needs, risks, and opportunities. Fourth, the strategy was formulated as a cycle comprising assessment, design, implementation, application, evaluation, and improvement. Fifth, the strategy was translated into a road map, division of responsibilities, and performance indicators.

Analytical trustworthiness was maintained through triangulation across source types. Findings from empirical articles were compared with systematic reviews, regulations, books, corporate reports, and official profiles. Conflicting results were retained to reduce confirmation bias. For example, positive findings concerning the effect of competency were compared with a study showing a nonsignificant effect when workload was more dominant. This procedure produced recommendations that position competency as part of the work system. The study has limitations. Internal data on employee numbers, competency-assessment results, unit-specific needs, development budgets, detailed quality indicators, patient experience, workload, and training effectiveness at Pertamina Balikpapan Hospital were unavailable. The recommendations are therefore an evidence-based framework that must be validated through interviews, surveys, observation, document audits, and workshops involving management, professional committees, unit heads, and employee representatives. This article does not claim the existence of any specific weakness at Pertamina Balikpapan Hospital without supporting public data.

4. Results and Discussion

Strategic needs of Pertamina Balikpapan Hospital

The review indicates that competency development needs at Pertamina Balikpapan Hospital emerge from the intersection of service characteristics, regulatory demands, accreditation status, corporate direction, and technological change. As a class C hospital with the highest accreditation status, the organization must maintain basic and specialist service capabilities, ensure standards compliance, and prepare capacity for service development. Its official service list shows technologies and procedures with varying levels of risk. The hyperbaric chamber, hemodialysis, cardiac center, intensive care, radiology, and emergency services require highly specific technical and safety competencies. Outpatient, pharmacy, administration, claims, and customer-service functions require speed, accuracy, coordination, and consistent communication. The first need is to ensure that clinical competency corresponds to authority, credentialing, professional standards, and service risks. Development should distinguish initial competency before independent work, maintenance competency, advanced competency, and competency required for new technologies or services. Training certificates demonstrate participation, while decisions about independent clinical practice should be based on skill demonstration, observation, case assessment, and recommendations from authorized parties. This approach is consistent with competency-based education, which emphasizes demonstrated outcomes rather than the completion of learning hours (Sultan et al., 2025). The second need is to strengthen patient safety and quality as interprofessional competencies. Patient identification, effective communication, medication safety, infection prevention, fall-risk management, procedural safety, incident reporting, and improvement learning are not the responsibility of a single profession. These competencies should be developed among physicians, nurses, support workers, administrative personnel, unit leaders, contract employees, and all parties interacting with service processes. Prasetyo (2024) emphasizes the relationship between safety competency, safety activities, and

performance, together with the influence of motivation, communication, facilities, and management support. The third need is digital and data capability. Indonesia's national health transformation is moving toward integrated information systems and data use in service delivery. The Ministry of Health is strengthening learning-management systems for health-training providers, while IHC is expanding digital services and systems. Employees need electronic-medical-record literacy, information security, patient confidentiality, data quality, basic analysis, application proficiency, and the ability to respond to system disruption. This direction corresponds with efforts to strengthen health learning and close the global digital-skills gap (World Health Organization, 2024b, 2025). Alotaibi et al. (2025) demonstrate that training contributes to digital readiness, although outcomes depend on support, infrastructure, and organizational readiness.

The fourth need is leadership and managerial competency. Hospital unit heads serve simultaneously as people managers and guardians of quality. They must be able to establish targets, analyze workloads, provide feedback, manage conflict, develop staff, lead change, use data, and implement process improvement. Kakemam & Liang (2023) emphasize that managerial-competency identification should be aligned with function, organizational level, and purpose. Giovanelli et al. (2024) show that effective management training must be relevant to work and supported by application opportunities. The fifth need covers patient-centered service and adaptive capability. The highest accreditation status should be reflected in empathic communication, complaint response, coordination, problem-solving, and rapid learning. Patrick et al. (2025) identify communication, empathy, basic medical knowledge, information systems, and quality evaluation as components of customer-service development. Krijgsheld et al. (2022) position adaptive performance as essential for healthcare organizations experiencing continuous change.

Table 1. Priority competency domains and their relationship with organizational performance.

Competency domain	Behavioral objective	Related organizational indicators
Clinical and professional	Practice consistent with authority, standards, evidence, and risk	Clinical compliance; adverse events; audit findings
Safety and quality	Risk identification, reporting, communication, and improvement	Incidents; safety-goal compliance; audit follow-up
Digital and data	System use, data quality, security, and analysis	Medical-record completeness; data errors; processing time
Leadership	Target setting, feedback, staff development, and change	Unit performance; engagement; succession readiness
Patient service	Empathic communication, complaint response, and coordination	Satisfaction; repeated complaints; response time
Adaptive and collaborative	Problem-solving, rapid learning, and interprofessional work	Improvement speed; innovation; continuity of service

Table 1 shows that competencies should be translated into observable behaviors and measurable organizational indicators. This connection prevents two errors. First, the hospital does not assess competency solely through abstract characteristics. Second, management does not assume that every change in organizational indicators results from training. Each indicator must be analyzed together with process, equipment, workload, policy, and leadership factors.

Diagnostic areas in the competency-development system

Because internal data were unavailable, this diagnosis does not assess the actual condition of Pertamina Balikpapan Hospital. It provides a list of areas for examination during validation. The first area is alignment between hospital strategy and the training calendar. Every annual program should be traceable to an organizational objective, risk profile, audit finding, service plan, technological change, or succession requirement. Programs that have no connection with any of these need sources should be reviewed. The second area is the quality of job-competency profiles. Job descriptions often list duties and responsibilities without tiered proficiency standards. The hospital requires a dictionary of core, leadership, and technical competencies. Each job profile should describe required competencies, proficiency levels, behavioral evidence, assessment methods, and validity periods for competencies

requiring renewal. Profiles should be simple enough to use rather than becoming lengthy documents that are difficult to implement.

The third area is equitable access and learning transfer. Programs should be accessible to clinical and nonclinical personnel according to need and risk. Nitasari & Rachmawati (2024) show the risks arising from unequal educational support. After completing a program, participants require assignments, tools, unit-head support, feedback, and 30-, 60-, and 90-day application plans. Noe (2023) explains that transfer is influenced by program design, participant characteristics, and the work environment. The fourth area is data integration. Learning history, assessment results, credentials, performance, career information, and unit needs are frequently stored in separate systems or documents. Fragmentation prevents management from identifying gaps quickly. A strengthened learning-management system should generate competency profiles, expiration reminders, learning recommendations, application evidence, and impact reports rather than functioning solely as a repository. The fifth area is effectiveness measurement. Program numbers, participant counts, learning hours, and costs remain necessary input and output indicators. They must be followed by participant response, knowledge improvement, skill demonstration, behavioral change, unit outcomes, and cost-related benefits. Multilevel measurement reduces the risk of declaring a program successful merely because participants report satisfaction.

An integrated competency-development strategy

The synthesis produced a seven-element cyclical model: strategic alignment, competency architecture, gap analysis, learning-portfolio design, workplace transfer and reinforcement, integration with performance and careers, and results-based evaluation. The human-resource or education and training function should manage this cycle with hospital directors, professional committees, the quality committee, information technology personnel, unit heads, and competency owners. Cross-functional ownership is essential because clinical, safety, leadership, and digital competencies cannot be managed by one department.

Strategic alignment and competency architecture

The first stage begins with a map of organizational objectives. Management should set three-year priorities, such as sustaining the highest accreditation status, strengthening flagship services, reducing safety risks, improving patient experience, increasing process efficiency, integrating digital systems, and ensuring leadership readiness. Each objective is then decomposed into critical processes, determining positions, required behaviors, and outcome indicators. Competency discussions consequently begin with organizational needs. The competency architecture can be built in three layers. A core layer applies to all employees and covers patient orientation, safety, ethics, communication, collaboration, compliance, digital literacy, and continuous learning. A leadership layer applies to coordinators, unit heads, managers, and executives and covers decision-making, people management, quality, change, finance, and strategy. A technical layer is developed for each job group based on professional standards, risks, technologies, and services.

Each competency should have four proficiency levels. The first demonstrates understanding and guided performance. The second represents independent performance in routine situations. The third demonstrates an ability to handle complex problems and guide colleagues. The fourth represents the capacity to establish standards, develop systems, and serve as an organizational reference. These levels enable the hospital to distinguish the needs of new employees, experienced practitioners, supervisors, and experts. The competency dictionary should contain a brief definition, positive behavioral indicators, behaviors to avoid, assessment methods, and evidence requirements. Effective communication at the independent level, for example, can be evidenced through handover observations, patient-education records, simulation scores, and patient feedback. Quality-management competency among unit heads can be evidenced by the ability to interpret data, conduct root-cause analysis, design corrective action, and monitor results.

Needs analysis and individual development plans

The second stage applies training-needs analysis at three levels. Organizational analysis examines strategy, risks, quality indicators, accreditation findings, technology plans, patient complaints, and succession needs. Task analysis identifies job standards, critical processes, frequency, consequences of error, and procedural changes. Individual analysis compares required proficiency with current evidence for each employee. One assessment method should

not be used for every competency. Knowledge can be measured through tests. Clinical skills can be assessed using an objective structured clinical examination, simulation, demonstration, or observation. Leadership behavior can be assessed through critical-incident interviews, 180- or 360-degree feedback, and evidence of unit achievements. Digital competency can be tested through system-based tasks. Service capability can be evaluated through observation, conversation simulations, and complaint data. Assessment results should be discussed in a development conversation between the employee and supervisor. This conversation produces an individual development plan containing one to three priorities, learning methods, required support, evidence of success, and deadlines. The number of priorities should remain limited and realistic. The plan must distinguish gaps caused by insufficient capability from problems caused by processes, workload, tools, or motivation. Training is not the solution to every performance problem. Priorities may be calculated using four criteria: impact on safety or quality, magnitude of the gap, number of affected employees, and strategic urgency. The organization may assign a score from one to five for each criterion. A high-safety-risk program receives priority even if it has few participants. An attractive program without a demonstrated gap or outcome indicator can be postponed.

A job-based blended-learning portfolio

The third stage develops the learning portfolio. Classroom training remains useful for concepts, discussion, and standardization, but effectiveness increases when it is combined with practice. Nassar et al. (2024) show that training can improve infection-control knowledge, attitudes, and practices. Sultan et al. (2025) emphasize demonstrated outcomes in competency-based education. Every priority program should therefore contain learning, practice, application, and feedback components. High-risk competencies should be developed through simulation. Resuscitation, emergency response, medication safety, crisis communication, evacuation, infection control, and equipment-use capabilities can be tested through scenarios. Simulation permits employees to make and correct errors without endangering patients. A debriefing session helps participants connect actions and decisions with consequences. Competencies used daily can be reinforced through microlearning. Five- to ten-minute materials can address one procedure, one risk, or one system change. Short materials are useful for refreshment but do not replace practice for complex competencies. The hospital can distribute them through a learning-management system, quick-response codes in work areas, or brief pre-shift meetings. Leadership development should combine workshops, coaching, improvement projects, and cross-unit exposure. Participants should solve actual problems rather than only study concepts, such as reducing waiting time, improving documentation completeness, or strengthening handover processes. Giovanelli et al. (2024) demonstrate the importance of relevance and application opportunities in management programs. Project outcomes then provide evidence of competency and organizational contribution. Job rotation and cross-functional assignments can build an understanding of complete processes. Administrative employees who understand clinical pathways can improve patient experience. Clinical personnel familiar with claims, procurement, and quality can make more efficient decisions. Rotations require objectives, supervisors, limits of authority, and outcome evidence so that they do not become temporary transfers without learning.

Table 2. Selection of development methods by competency objective.

Objective	Primary methods	Evidence of application
Knowledge of regulations and procedures	E-learning, brief classes, case studies	Tests; case analysis; documentation compliance
High-risk clinical skills	Simulation, demonstration, supervision	Skills-test completion; practice observation
Communication and service	Conversation simulation, feedback, coaching	Observation; complaints; patient experience
Leadership and quality	Improvement projects, mentoring, workshops	Project outcomes; unit performance; team feedback
Digital and data	System practice, microlearning, help clinics	Data quality; processing time; usage errors
Interprofessional collaboration	Case discussion, conferences, limited rotation	Handover quality; coordinated follow-up

Transfer, reinforcement, and workplace learning

The fourth stage focuses on transfer. Before a program begins, supervisors and participants should agree on the behavior to be applied. Participants then prepare an action plan upon program completion. On day 30, supervisors examine initial application. On day 60, participants present evidence, discuss barriers, and receive feedback. On day 90, supervisors assess behavioral change and its relationship with unit indicators. Unit heads should be trained as employee developers. Their responsibilities include observation, specific feedback, brief coaching, recognition of improvement, and safe correction of deviations. This support matters because participants interact with supervisors more frequently than with facilitators. When supervisors provide no opportunity for application, the organization sends an inconsistent message. Mentoring supports medium-term development, role readiness, and tacit-knowledge transfer. Mentors help mentees understand professional judgment, relationships, values, and decision-making processes not always written in procedures. A program requires mentor criteria, objectives, schedules, ethical guidance, and an evaluation mechanism. Mentoring relationships should not replace direct-supervisor accountability. Communities of practice can be established for patient safety, quality, nursing, administration, digital systems, or customer service. Members share cases, tools, incident lessons, and solutions through brief, regular meetings. Learning outcomes should be documented in a repository so that knowledge is not lost when members change roles. This mechanism transforms individual knowledge into organizational knowledge. Audits and incidents should become curriculum sources. When an audit reveals repeated errors, the team should determine whether the causes involve knowledge, skills, procedures, tools, communication, or workload. If a competency gap exists, learning materials can be developed from actual cases without disclosing patient or employee identities. This approach improves relevance and supports a nonpunitive learning culture.

Integration with performance management, careers, and succession

The fifth stage connects development with the human-resource system. Individual performance objectives should contain both results and behaviors. Employees should be assessed not only on work volume but on compliance, quality, collaboration, safety, and improvement. Weighting should vary by job. This integration prevents training from promoting one behavior while the reward system encourages another. Competency assessment should remain distinct from outcome assessment, although both should be discussed together. High results with low competency may indicate reliance on risky work practices or temporary support. High competency with low results may indicate process, equipment, workload, or placement barriers. A two-dimensional matrix helps supervisors select development, system improvement, assignment, or recognition actions. Career paths should specify competency and evidence requirements rather than rely only on tenure. Employees gain clarity about the capabilities required for a future role. The hospital can provide expert and managerial tracks so that high-performing technical employees are not forced into management.

Promotion readiness should be evaluated through sustained performance, competency, values, potential, cross-functional experience, and assignment results. Succession planning for critical positions should begin by identifying roles with substantial effects on operations, safety, flagship services, or sustainability. Each role should have one or more candidates with recorded readiness levels. Candidate-development plans may include acting assignments, shadowing, projects, and rotations. This system reduces the risk of capability vacancies arising from retirement, transfer, or service expansion. Recognition does not always require financial incentives. Organizations can offer opportunities to join projects, become facilitators, attend professional forums, obtain certifications, or lead improvements. Recognition should reward application and results rather than training attendance alone, thereby directing the learning culture toward contribution.

Learning digitalization and competency analytics

The sixth stage uses technology to reinforce the system. The learning-management system should store job profiles, assessment results, program history, certificates, validity periods, individual plans, application evidence, and feedback. It can recommend materials according to job and gap data. Automated reminders support mandatory-competency management and reduce expiration risks. Management dashboards should present actionable

indicators, including the percentage of positions with competency profiles, employees assessed, critical gaps by unit, development-plan completion, certificates approaching expiration, 90-day transfer, and relationships between programs and unit indicators. Dashboards should not be overloaded. Priority should be given to information supporting decisions.

Analytics can be introduced gradually. The first stage is descriptive and shows completed activities. The second is diagnostic and identifies groups with gaps, programs with low transfer, or units whose indicators have not improved. The third may use limited predictive analysis, such as forecasting certification, succession, or service-capacity needs. Data use must comply with security, confidentiality, access rights, and fairness principles. The digital competencies of participants and facilitators should be built alongside infrastructure. Alotaibi et al. (2025) explain that digital training is influenced by organizational support and resources. Effective online programs require concise content, straightforward navigation, access compatible with work schedules, user assistance, and evaluation. Employees experiencing access barriers should receive alternative learning options.

Impact evaluation and continuous improvement

The seventh stage assesses effectiveness across five levels. The first is participant response concerning relevance, facilitation, and ease of learning. The second is learning measured through appropriate knowledge, skills, or confidence. The third is workplace behavior. The fourth is unit or organizational results. The fifth is investment value for large and strategic programs. Evaluation must be designed before program implementation. If a program aims to reduce documentation errors, the hospital should establish a baseline, error definition, data source, target, and observation period. If the objective is improved communication, evidence may come from observation, handover audits, incident reports, or patient experience. A program need not be assessed with every indicator; measures should correspond to its results chain. The contribution of a program to organizational results cannot always be perfectly isolated. The hospital may use before-and-after comparison, a comparison unit when feasible, trend analysis, supervisor interviews, and documentation of process changes. Conclusions should identify other influential factors. Scientific caution is preferable to attributing every improvement to training. Programs that fail to produce transfer should be improved rather than automatically discontinued. Analysis may reveal irrelevant content, an inappropriate method, inadequate supervisory support, insufficient practice opportunities, unavailable equipment, or an excessively distant indicator. Improvement includes reviewing the design, adjusting objectives, strengthening the environment, and conducting a new evaluation.

Three-year implementation road map

Implementation should be staged so that managerial capacity, technology, budgets, and behavior can develop progressively. The first stage, covering months 0 to 12, builds the foundation. Activities include establishing a competency steering council, setting strategic priorities, mapping critical positions, developing the core competency dictionary, piloting assessments in selected units, strengthening data, and choosing rapid programs related to high risks. The second stage, covering months 13 to 24, expands and integrates the system. Competency profiles are developed for all priority job groups. Development conversations become part of the performance cycle. Blended learning, simulation, coaching, and improvement projects are expanded. Digital systems connect learning history, assessment, and application evidence. Career paths and succession planning begin to use competency requirements. The third stage, covering months 25 to 36, focuses on optimization. The hospital evaluates strategic-program impacts, refines the model, improves analytics, builds communities of practice, prepares internal facilitators, and conducts comparisons among units. Evaluation results inform the next budget and priorities. Effective programs are standardized, while ineffective programs are redesigned.

Table 3. Competency-development road map for Pertamina Balikpapan Hospital.

Stage	Focus	Primary outputs	Success measures
Months 0–12	Foundation and pilot	Governance; core dictionary; critical-job profiles; initial assessment	Profile coverage; baseline data; individual plans; high-risk programs
Months 13–24	Expansion and integration	Learning portfolio; 90-day transfer; performance and career integration	Behavioral change; assessment coverage; role readiness; unit outcomes
Months 25–36	Optimization and analytics	Impact evaluation; communities of practice; internal facilitators; dashboard	Quality; safety; efficiency; patient experience; succession

The road map requires change management. Management should explain the rationale, benefits, roles, and use of data to employees. Competency assessment often causes anxiety because employees perceive it as punitive. Communication should emphasize development and safety as the primary purposes, supported by fair procedures and the right to receive feedback. Data may still inform position decisions when procedures are clear and evidence is sufficient. Pilot-unit selection should consider leadership support, risk, data availability, and the opportunity to demonstrate results. One clinical unit, one support unit, and one nonclinical function can be selected so that the model is tested under different characteristics. Pilot results should be documented in guidance, tools, working time, costs, barriers, and outcomes. Lessons should inform expansion.

Governance, indicators, and accountability

The competency-development steering council should be led by hospital management and include human resources, education and training, medical, nursing, and allied-health professional committees, quality and patient-safety functions, information technology, finance, and unit heads. The council sets priorities, approves standards, oversees equitable access, monitors risks, and evaluates results. Human resources functions as the system integrator rather than the sole owner of all competencies. Competency owners should be subject-matter experts with appropriate authority and experience. They develop behavioral indicators, assessment tools, and passing standards with learning managers. Unit heads are responsible for application, observation, feedback, and outcome evidence. Participants are responsible for completing their plans, requesting support, applying capability, and documenting learning. Budgets should distinguish compliance costs, strategic development, leadership strengthening, digital capability, and innovation. Priorities should reflect risk and benefit. Mandatory programs are not automatically strategic, while strategic programs cannot disregard mandatory requirements. The hospital can use internal facilitators for selected subjects while maintaining quality, workload controls, and recognition. Indicators should form an input, process, output, intermediate-outcome, and organizational-outcome chain. Inputs include budgets and facilitator capacity. Processes include needs analysis and design quality. Outputs include completion and passing rates. Intermediate outcomes include behavior and compliance. Organizational outcomes include safety, quality, efficiency, patient experience, innovation, and talent readiness.

Table 4. Evaluation indicators for the competency-development system.

Level	Example indicators	Data source	Frequency
Foundation	Positions with profiles; employees assessed	HR system; competency documents	Quarterly
Learning	Completion; score improvement; skill tests	Learning-management system; assessments	Every program
Transfer	Action plans completed; behavior applied at 90 days	Supervisor observation; portfolios	Monthly and quarterly
Unit	Compliance; processing time; documentation quality; complaints	Audits; quality system; service data	Monthly

Level	Example indicators	Data source	Frequency
Organization	Incidents; patient experience; productivity; succession	Management dashboard; surveys; HR system	Quarterly and annually

Indicator targets should be established after baseline data are available. Numbers set without data may be too low or unrealistic. For safety indicators, fewer reports do not necessarily represent improvement because they can indicate a weak reporting culture. Interpretation should consider reporting rates, severity, event type, completion of follow-up, and learning. Accountability should be strengthened through quarterly review meetings. These meetings need not discuss every program individually but should focus on critical gaps, low transfer, unit indicators, certification risks, and decisions required. Every decision should have an owner and a deadline. The annual report should explain investment, achievements, impacts, limitations, and subsequent priorities.

Expected impacts and implementation risks

The integrated strategy is expected to improve patient safety, communication, response time, and service consistency. Internally, it should strengthen compliance, coordination, data quality, efficiency, feedback culture, leadership, internal mobility, succession readiness, productivity, reputation, risk control, and service-development capacity. Safety effects arise from technical competency, communication, culture, and work design. Rachmawati et al. (2023) position safety as a system outcome, while Prasetyo (2024) emphasizes management support and facilities. Assessment results should inform quality programs; if indicators remain unchanged despite adequate skills, management should examine procedures, technology, workload, layout, and coordination. Patient experience and efficiency depend on communication, pathway improvement, and technology use. Clear information, waiting time, empathy, privacy, coordination, and safety all matter. Digitalization should therefore include process simplification and employee participation in usability testing.

Key risks are administrative formalism, resistance to assessment, and unequal access. Mitigation requires limited documentation, existing work evidence, behavioral assessment, clear communication, trained assessors, transparent criteria, review mechanisms, gap-based priorities, flexible schedules, varied learning methods, and monitoring by job group. Learning burden, vendor dependence, measurement errors, and data security require workload-based schedules, internal-facilitator development, balanced indicators, access governance, data classification, backups, and audits. Workload management and coping strategies are especially important in high-pressure emergency services (Rantung, 2024). Indonesian findings reinforce this systemic approach. Walidah et al. (2024), Febrina et al. (2024), and Mulyani et al. (2024) associate competency with performance or quality, while Rusmawati et al. (2023) show that workload may be more decisive. Development must therefore be combined with evaluation of workload, facilities, processes, leadership, and job satisfaction.

Model Comparison and Contribution

The model integrates the needs analysis, design, transfer, and evaluation components identified by Noe (2023); the demonstrable outcomes emphasized by Sultan et al. (2025); the relevance and application opportunities stressed by Giovanelli et al. (2024); and the organizational, team, and individual factors described by Krijgsheld et al. (2022). Its first distinction is the integration of clinical and nonclinical competencies across physicians, nurses, allied-health workers, data and administrative officers, information-technology and facility personnel, finance and procurement functions, and executives. Core competencies maintain shared behavior, while technical competencies differentiate professional and job requirements. Second, each competency is paired with observable behavior and process or outcome indicators, allowing management to assess contributions to quality, safety, patient experience, efficiency, digitalization, and succession rather than stopping at course completion. Third, 30-, 60-, and 90-day transfer checkpoints position supervisors as reinforcers, require work evidence, and generate improvement data without demanding complex technology. Fourth, career and succession integration clarifies capabilities required for future roles and provides an organizational readiness map, connecting learning with human-resource decisions. Fifth, analytics develop gradually from job profiles, assessments, learning histories, individual plans, and transfer evidence toward diagnostic and limited predictive analysis. This sequence reduces the risk of technology investment before process and data readiness. The practical

contribution is a three-year road map, role allocation, method selection, and adaptable indicators. Academically, the model proposes that competency connects human-resource strategy and hospital performance through transfer, support, system integration, and working conditions rather than through a simple direct relationship. Empirical validation remains necessary. Future studies can map job-group competencies, measure gaps, assess supervisory support for transfer, conduct pre- and post-intervention evaluations, and compare units, professions, tenure groups, or program categories. Employee and patient accounts can help explain quantitative findings.

5. Conclusion

Employee competency development at Pertamina Balikpapan Hospital should be governed as a strategic system connected with quality, patient safety, patient experience, efficiency, digitalization, and sustainability. Service diversity, the highest accreditation status, regulatory changes, and IHC development priorities require an integrated arrangement of clinical, safety, digital, leadership, patient-service, and adaptive competencies. The recommended strategy comprises alignment with organizational objectives, competency architecture, gap analysis at organizational, task, and individual levels, a blended-learning portfolio, workplace-transfer reinforcement, integration with performance and careers, data digitalization, and multilevel evaluation extending to organizational outcomes. Implementation proceeds through foundation, expansion and integration, and analytics-based optimization stages. Success should not be measured only through participant numbers, hours, costs, or certificates. Primary measures include demonstrable capability, behavioral change, compliance, improved unit indicators, safety, quality, patient experience, productivity, and succession readiness. Competency should be combined with supervisory support, workload management, equipment, processes, and a learning culture. Because this article relies on public documents, management should validate the model using internal data and stakeholder participation before full implementation.

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