成大醫院 NCKUH 1988

National Cheng Kung University Hospital

2024

Sustainability Report

CONTENTS

About This Report

This is the first Sustainability Report published by National Cheng Kung University Hospital (hereinafter referred to as “NCKUH,” “the Hospital,” or “we”). The report is structured around seven main chapters: Sustainable Management at NCKUH, Excellence in Healthcare and Smart Hospital, Holistic Integration and Community-Based Care, Interdisciplinary Connections and Industrial Innovation, Commitment to Education and Talent Cultivation, Shared Prosperity for Medical Staff and a Happy Workplace, and Environmental Sustainability and Technological Net Zero. These chapters highlight our practices and achievements in hospital governance, environmental sustainability, and social inclusion. Through this report, we aim to enhance communication with stakeholders and continue advancing toward our vision: “To become the most ideal health care center for the public, and the most ideal environment for teaching, research, and work for medical professionals.”

Reporting Principles and Guidelines

This report has been prepared in accordance with the Global Reporting InitiativeGRI) Standards issued by the Global Reporting Initiatives, the industry standards of the Sustainability Accounting Standards Board (SASB), the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), and the United Nations Sustainable Development Goals (SDGs). The compilation of this report adheres to the reporting principles and requirements set forth by these frameworks.

To enhance materiality and comparability, the financial performance in this report is presented in New Taiwan Dollars (NTD), while data related to energy conservation and carbon reduction is presented in internationally recognized units.

This report was compiled with reference to the following international standards and guidelines：

Issuing Organizations	International Standards
The United Nations, UN	UN Sustainable Development Goals, SDGs
Global Sustainability Standards Board, GSSB	GRI Standards：2021
International Sustainability Standards Board, ISSB	SASB (Sustainability Accounting Standards Board, SASB)Healthcare Industry Standards
Financial Stability Board, FSB	Task Force on Climate-related Financial Disclosures, TCFD

Report Review and External Assurance

This report was compiled and edited by the Sustainable Development Committee. All data and content were reviewed and confirmed by the respective departmental supervisors, and finalized with approval from the Superintendent.

To enhance credibility, the report has undergone external assurance by French Standards Association Group French Standards International Certification Co., Ltd. (AFNOR Asia Ltd.) , The assurance process was conducted in accordance with the GRI Standards 2021, following the AA1000AS v3 assurance standard at a Moderate Level of Assurance (Type 1). The Independent Assurance Statement is provided in the Appendix.

Reporting Scope, Reporting Period, and Frequency

This report focuses on the operations of National Cheng Kung University Hospital (main Tainan campus). It does not include information from the Geriatric Hospital and Shalun Hospital currently under planning, nor from the Douliu Branch. The data disclosed covers the period from January 1 to December 31, 2024, with partial references to events before January 1, 2024, or after December 31, 2024. No restatement of information was made in this report.

The 2024 Sustainability Report of National Cheng Kung University Hospital is the Hospital's first sustainability report. Future reports are expected to be published annually, aligned with the fiscal year-end.

Publication Timeline

◉ Date of Publication：September 2025
◉ Next Scheduled Publication：September 2025

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ESG Section of NCKU Hospital

Message from the Superintendent

National Cheng Kung University Hospital (NCKUH) officially commenced operations on June 12, 1988. As the largest university medical center and teaching hospital in southern Taiwan, NCKUH has shouldered the three core missions of teaching, research, and service since its establishment. The Hospital has been committed to its social responsibility in providing care for emergency, critical, complex, and rare diseases. Upholding the principles of clinical teaching and internships, medical research advancement, comprehensive healthcare services, regional medical support, and continuing education for medical professionals, NCKUH has shaped its institutional culture with core values of Life, Compassion, Excellence, and Innovation. The Hospital strives not only to be the most ideal medical care institution but also to fulfill the vision of being the most ideal environment for teaching, research, and professional practice. With a profound sense of responsibility, NCKUH positions itself as a pioneer—not in pursuit of personal achievements or maximum profit—but to enhance patient welfare, nurture future talents, accumulate medical knowledge, and set a benchmark for the healthcare industry.

Li, Ching-Wei

Superintendent,

National Cheng Kung University Hospital

To ensure sustainable development, NCKUH inaugurated the “Outpatient Building—Clinical Research and Cancer Center” on June 12, 2010. Built upon existing resources and facilities, the expansion includes an Outpatient Center, Cancer Center, Research Center, and a Center for Public Health and Environmental Medicine, meeting the growing space demands for outpatient services, cancer care, and medical research. The exterior design features an artistic sky bridge that connects to the Inpatient Building, establishing a new landmark for the NCKU Medical Campus and enriching the cityscape.

Beyond internal development, NCKUH has worked to enhance the overall healthcare quality in the Yunlin–Chiayi–Tainan region. In 2005, the Hospital took over the military Douliu Hospital and transformed it into the NCKUH Douliu Branch. Since 2008, it has continued deepening cooperation with Tainan Hospital of the Ministry of Health and Welfare (formerly Tainan Hospital of the Department of Health), offering operational and staffing support to improve performance and healthcare standards. In line with the Ministry’s two-way referral system and hierarchical medical policy, since 2017, NCKUH has successively established collaborative wards with Kuo General Hospital, Chest Hospital of the Ministry of Health and Welfare and JinSan Chronic Care Hospital. On October 2, 2019, the Hospital announced the formation of the Cheng-Hsing Medical Alliance, partnering with primary clinics to expand two-way referrals and implement tiered healthcare. With real-time medical information integration to track patient referral status, the community can enjoy professional and comprehensive healthcare services.

In response to the rapid development of artificial intelligence, NCKUH actively engages in cross-sector collaboration to integrate smart healthcare into clinical departments and establish a medical big data platform to improve research sampling efficiency and enhance overall competitiveness. Over the past three years, the Hospital has completed several major infrastructure projects: ERCP facilities, expansion of the cardiac catheterization lab, a multi-person hyperbaric oxygen chamber, a minimally invasive gynecology operating room, the Douliu Branch cardiac catheterization lab, a dual-hybrid one-stop diagnosis and treatment center, a Hybrid OR, CyberKnife Installation for the Radiation Oncology Program, upgraded CT scanners, and MRI installation. The Department of Genomic Medicine was the first to obtain TAF accreditation, marking the beginning of biomedical digitalization and laying a strong foundation for future precision medicine. NCKUH has also deepened international cooperation by signing multiple Memoranda of Understanding (MOUs), raising the Hospital's visibility, expanding its influence, and offering more advanced learning and training opportunities for staff, thereby strengthening its position in cutting-edge medical technologies.

Thanks to significant administrative improvements, NCKUH has achieved solid operational results and financial stability. In pursuit of sustainable development, the Hospital is courageously expanding its horizons with the Geriatric Hospital and the Shalun Branch, providing more opportunities for future generations. The Geriatric Hospital will become an ideal setting for senior medical and long-term care, integrating geriatric medicine research and smart transformation to align with Long-Term Care 2.0 policies, fulfilling national responsibilities in elderly care and research development. The Shalun Branch will serve as a clinical validation site to promote the biomedical industry, support international medical cooperation and talent training aligned with the New Southbound Policy, and be established as a core institution of the national pediatric care network, dedicated to the development of care models and talent cultivation for pediatric emergency, critical, complex, and rare diseases.

As the global wave of net-zero carbon emissions and ESG sustainability intensifies, NCKUH actively supports Taiwan's 2050 Net-Zero Emissions Policy and the United Nations Sustainable Development Goals (SDGs). On December 4, 2024, the Hospital officially signed the Hospital Sustainable Development Initiative with the Taiwan Institute for Sustainable Energy (TAISE). The partnership encompasses hospital governance, smart healthcare transformation, workplace wellbeing, environmental sustainability, and enhanced social responsibility, reflecting NCKUH's determination to strengthen resilience and align with international sustainability and net-zero goals.

In response to climate change, NCKUH remains committed to advancing green healthcare and fostering a sustainable environment. Based on the EU's "twin Transformation" framework, the Hospital integrates ESG and digital transformation to enhance medical efficiency and services. Through digital innovation, it also strives to meet carbon reduction targets. While promoting net-zero transformation, the Hospital upholds a patient-centered philosophy and continues to deepen digital transformation. This effort has been widely recognized, as NCKUH was named one of the World's Best Smart Hospitals 2025 by Newsweek, one of only eight hospitals in Taiwan to receive the honor.

We hope that NCKUH will continue to thrive in both intelligence and sustainability. Together, let us work toward a better future, upholding the values of respect for life, holistic care, and environmental friendliness, while pursuing excellence and innovation. We are committed to providing an inclusive, shared, and sustainable healthcare environment for all.

About NCKU Hospital

The Only National University-Affiliated Hospital in Southern Taiwan

The establishment of National Cheng Kung University Hospital (NCKU Hospital) originated from the longstanding consensus and strategic planning of successive administrations at National Cheng Kung University (NCKU) to advance medical education and strengthen healthcare resources in southern Taiwan. In pursuit of fostering medical development in the region, bridging the healthcare resource gap between the north and south, and fulfilling NCKU's vision of becoming a comprehensive university, the hospital was approved for establishment in 1981 as a medical center. It became the first university-affiliated hospital founded by a national university in Taiwan following the government's relocation, marking a pioneering and symbolic achievement.

Construction of the medical center began in 1985 and, after years of planning and building, the hospital officially opened on June 12, 1988. It was a significant milestone as one of Taiwan's "Fourteen Major Infrastructure Projects," playing a pivotal role in the nation's medical and educational history.

Since its inception, NCKU Hospital has upheld its threefold mission of teaching, research, and service. With a focus on the treatment and care of emergency, critical, complex, and rare diseases, the hospital has established a high-quality, patient-centered healthcare system. It has also promoted comprehensive development in healthcare service quality, medical research, and clinical education. In 1993, the hospital was officially accredited as a medical center by the Department of Health, and it has since maintained its status, firmly standing as a national-level medical center in southern Taiwan.

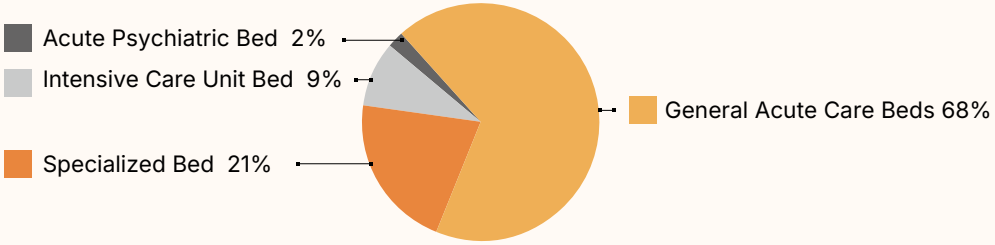
Positioned in the midstream of the healthcare industry value chain, NCKU Hospital specializes in clinical services and patient care. It also provides essential medical services such as outpatient care, inpatient care, and emergency services. By fostering stable partnerships with upstream suppliers (e.g., medical device, pharmaceutical, and IT system providers) and downstream care systems (e.g., long-term care institutions and community healthcare units), the hospital has formed a comprehensive healthcare service network. This integration enhances resource coordination and service extension, thereby supporting the overall goal of regional medical development and sustainable health.

Hospital Exterior

General Information

Hospital Name	National Cheng Kung University Hospital
Year of Establishment	1988
Industry Category	Medical Services
Hospital Type	Medical Center, Teaching Hospital
Address	No. 138, Shengli Road, North District, Tainan City
Scope of Services	1. Basic and Emergency, Critical, Complex, and Rare Disease Care 2. Preventive medicine and health management 3. Special population and community care 4. Health education and promotion 5. Medical research and technological development 6. Medical personnel training
Number of Employees	Total of 5,047 employees (including research assistants)
Bed Allocation	Total：1,359 beds
(2024) MedicalService Volume	Outpatient Visits：1,632,843 Inpatient Admissions：53,596 Emergency Visits：87,333

NCKU Hospital Bed Allocation



NCKU Hospital Value Chain Model

Upstream

Medical supply and technical support

- Medical-related suppliers
- Purchasing and supply chain management
- Equipment and technology evaluation
- Medicine and material inventory management

Midstream

Medical services and patient care

- Basic medical care, health management, and preventive medicine
- Medical resource and system management
- Clinical trials and research cooperation
- Medical quality and legal compliance

Downstream

Patient follow-up and extended care

- Patients, community members, and trainees
- Community and home-based healthcare
- Patient referral and follow-up
- Telemedicine and digital health management

Management Philosophy

Over the course of nearly forty years, NCKU Hospital has continuously enhanced the quality of clinical care, strengthened its academic research capabilities, and expanded regional healthcare cooperation networks to fulfill its social responsibilities and public value as a university hospital. In order to clearly convey its long-term development direction and cultural essence—and to foster collective consensus—the Hospital has established its vision and core values, encompassing “Life,” “Compassion,” “Excellence,” and “Innovation” as the foundation for future sustainable development and holistic medical services.

With a vision to become the most trusted and ideal health care center in Southern Taiwan, NCKU Hospital is committed to developing an internationally competitive smart healthcare system and academic environment, while continuously advancing excellence in medical quality and foresight in medical research. In terms of mission, the Hospital is dedicated to providing high-quality, accessible, and holistic medical services, integrating professional and innovative education and research with ongoing talent development, thereby promoting balanced regional medical development and achieving universal health and sustainable well-being.

Vision

- The most trusted and ideal health care center in Southern Taiwan
- The ideal health care center for the public
- The ideal teaching, research, and working environment for medical professionals

Mission

- To provide high-quality, accessible, and holistic medical services

Core Values

- Life
- Compassion
- Excellence
- Innovation

Emergency, Critical, Complex, and Rare Disease Care

In the fields of emergency care, critical care, complex disease treatment, and rare disease management, NCKU Hospital has established a comprehensive and exemplary healthcare service system. Through the establishment of specialized centers, integration of cross-departmental teams, and the introduction of advanced medical technologies, the Hospital not only fills the gaps in regional medical capacity but also actively promotes upgrades in medical quality and the application of smart healthcare, thereby contributing to the concrete implementation of national health policies. The following presents the core missi sons and representative achievements in these four core dimensions：

Four Core Dimensions of Emergency, Critical, Complex, and Rare Disease Care

Emergency Care

Designated by the Ministry of Health and Welfare as a “Severe Emergency Responsibility Hospital,” NCKU Hospital also serves as the Southern Regional Emergency Medical Operation Center and the Southern Regional Executive Center for the National Disaster Medical Assistance Team. It plays a vital role as a central hub for disaster and emergency response in Southern Taiwan.

Critical Care

The Hospital has established a multidisciplinary integrated cancer outpatient clinic and, in collaboration with the National Health Research Institutes, founded the “National Southern Cancer Center,” demonstrating its deep commitment to advanced, integrated healthcare. The Hospital also possesses the capability to perform heart, liver, kidney, and lung transplants, and has developed therapies such as hypothermia treatment and a dedicated pulmonary hypertension team. It is the only hospital in the Yunlin–Chiayi–Tainan region certified to perform transcatheter aortic valve implantation (TAVI).

Complex Disease Treatment

NCKU Hospital is among the very few medical institutions in Taiwan that have successfully completed six types of organ transplants (heart, liver, lung, kidney, cornea, and bone). It is also the sole designated hospital in the Chiayi–Tainan region recognized by the Taiwan Organ Registry and Sharing Center.

Rare Disease and Cancer Treatment

The Hospital has established an “Integrated Care Center for Hereditary and Rare Diseases” as well as a comprehensive cancer center and oncology care platform. It has also founded a Research Center for Geriatric Health and Care, integrating smart healthcare, big data, and AI-assisted diagnostics to build a patient-centered precision medicine system.

Specialized Medical Services

In response to the increasingly diverse and complex healthcare needs, NCKU Hospital has continuously advanced specialized medical services with depth and regional significance by leveraging strengths in clinical practice, medical research, and specialized education. Centered around the four pillars of emergency, critical, complex, and rare diseases, the hospital integrates cross-disciplinary resources and professional teams to gradually establish a comprehensive system that covers disease prevention, diagnosis, treatment, and care.

Currently, the hospital operates 17 specialized medical centers spanning a wide range of fields, including stroke, cancer, genetics, dementia, breast medicine, sleep medicine, international healthcare, health management, physical therapy, joint reconstruction, clinical trials, infection control, diabetes prevention and treatment, interventional medicine, integrated diagnosis and treatment of occupational injuries, PET scans, and human subject protection. These centers not only enhance the depth of clinical services but also showcase NCKU Hospital's outstanding achievements in smart healthcare, precision medicine, and holistic care—providing the people of southern Taiwan with high-quality and forward-looking medical services.

17 special medical services

	Medical Center	Service Features
01	**Stroke**	◉ A care model that emphasizes both treatment and prevention. ◉ An outstanding and comprehensive medical center for cerebrovascular diseases.
02	**PET (Positron Emission Tomography)**	◉ Non-invasive, high-tech cancer screening equipment. ◉ Examination process causes no harm or side effects to the subject. ◉ Assists cancer patients in achieving accurate staging and treatment.
03	**Cancer**	◉ Multidisciplinary integrated cancer care. ◉ Patient-centered comprehensive diagnostic and treatment care.
04	**Genetics**	◉ Genetic disease consultation services. ◉ Collection of genetic disease epidemiology data and related consultation. ◉ Definitive diagnosis of genetic diseases.
05	**Dementia**	◉ Holistic care model with health education services. ◉ Comprehensive rehabilitation and medical care.
06	**Breast Medicine**	◉ Performed Taiwan's first minimally invasive breast surgery. ◉ Established all-round breast cancer care for women combining intelligence and technology.
07	**Sleep Medicine**	◉ Equipped with comprehensive sleep diagnostic equipment. ◉ Fully trained professional faculty.
08	**International Healthcare**	◉ Integration of NCKU Hospital's international collaboration, international healthcare, and health promotion services.
09	**Health Management**	◉ Independent, comfortable, and highly private environment. ◉ Comprehensive and flexible check-up items. ◉ Complete follow-up in specialized health check-up clinics.
10	**Physical Therapy**	◉ Aligned with the world's most advanced therapy concepts. ◉ Focus on exercise therapy, supplemented with manual and device-based therapy.

	Medical Center	Service Features
11	Joint Reconstruction	◉ Development of computer-navigated and minimally invasive surgery. ◉ Certified by the Joint Replacement Care Program of the Joint Commission of Taiwan.
12	Clinical Trials	◉ Experience in conducting global clinical trials. ◉ Certified by various domestic and international institutions.
13	Infection Control	◉ Implementation of infectious disease monitoring, reporting, and prevention. ◉ In-hospital infection surveillance and infection control policy development. ◉ Environmental surveillance and investigation of infection outbreaks in the hospital.
14	Human Subject Protection	◉ Responsible for implementation, management, audit, and training of human research subject protection regulations and related affairs at the hospital.
15	Diabetes Prevention and Treatment	◉ Patient-centered integrated diabetes treatment model. ◉ Provision of high-quality, high-standard, diversified, multidisciplinary, and integrated diabetes treatment.
16	Interventional Medicine Center	◉ Provision of interventional medicine with holistic care approach.
17	Integrated Services for Diagnosis and Treatment of Occupational Injuries	◉ Provision of professional manpower support and training services for occupational healthcare to regional medical institutions. ◉ Assisting enterprises in establishing safe working environments

Industry Associations

To enhance resource management efficiency, improve the hospital's competitiveness, and stay informed of the latest industry trends, the Hospital participates in industry associations to exchange technical and management experience with the sector, fostering industry collaboration and overall development.

List of Industry Associations and Memberships

Industry Associations / National or International Advocacy Organizations	Membership Status (Position Held)
Tainan City Medical Association	Board Director
Tainan City Medical Association	Vice Chairman
Tainan City Medical Association	Executive Supervisor
International Healthcare Promotion Association	Supervisor
Joint Commission of Taiwan	Board Director
National Union of Public Hospitals, R.O.C.	Director
Taiwan Medical Center Association	Director
Taiwan Hospital Association	Director
Institute for Biotechnology and Medicine Industry	Director

Sustainability Mission and Actions

2024 Results and Performance

S. Social Aspects

- Held a total of **766** community health promotion and screening events.
- **896** cases referred to Long-Term Care 2.0 services; **548** cases referred to PAC services, with three consecutive years of growth.
- Recorded **zero** occupational disease cases.
- Admitted **1,441** individuals to the NCKU Ren-Ai Silver Club for long-term care services.
- Achieved an **82.10%** participation rate in external quality and patient safety presentations.
- A total of **94,956** participants received occupational safety training, with a total training cost of **NTD 1,503,103.**
- Achieved a **99.1%**physician training completion rate; **100%** completion for other staff categories.
  99.4% of holistic care clinical instructors certified; **22.4%** completed advanced training.
- Trained 125 PGY physicians annually, with a **100%** completion rate and **98%** satisfaction.
- 85 medical interns took the OSCE exam with a pass rate of **98.7%.**
- Held 2 online health promotion courses with **1,769 participants.**
- 1,386 employees received general health checkups costing **NTD 2,921,960; 355** employees received special health checkups costing **NTD 694,960.**

E. Environmental Aspects

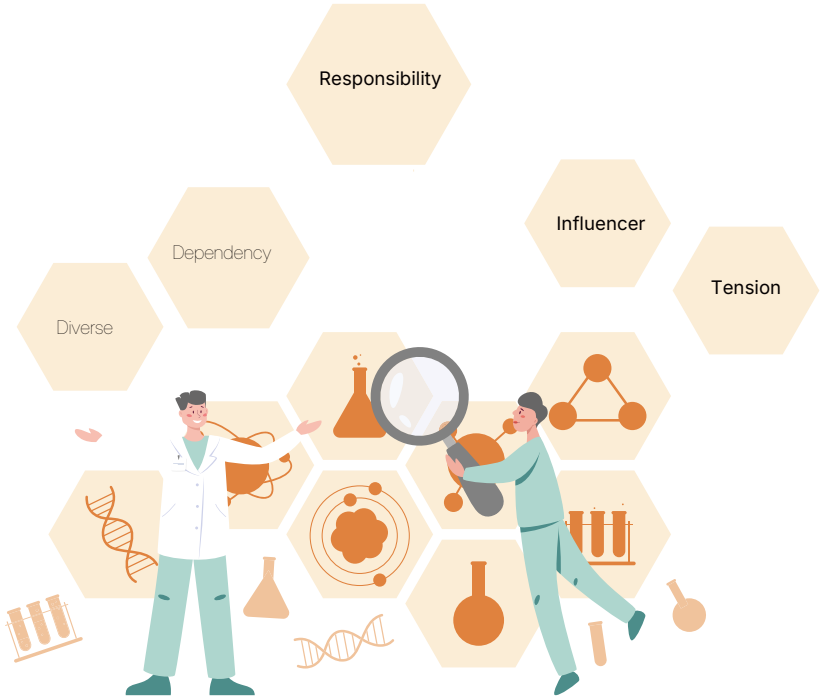
- Replaced lighting equipment, chilled water units, and elevators, saving a total of **1,344,743 kWh** of electricity, reducing approximately **637 tons of CO_2e** emissions.
- The recyclable reuse ratio of reusable waste reached **21.56%.**
- **70%** of building materials used were eco-labeled products.
- **100%** of purchased medical devices were certified with green labels.
- Achieved a **100%** performance rate in the 2024 green procurement assessment.
- Signed the **Hospital Sustainable Development Initiative** with the Taiwan Institute for Sustainable Energy (TAISE).

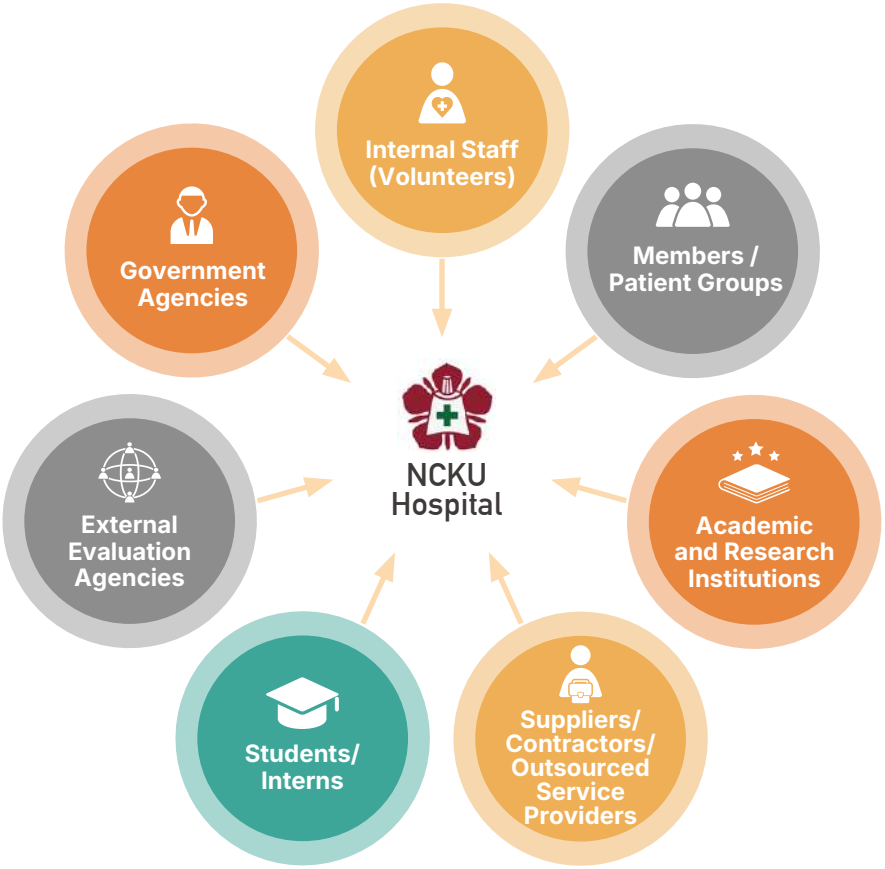
G. Governance Aspects

- Recognized by international media Newsweek as one of the '**World's Best Smart Hospitals 2025**'.
- Completed **7 empirical studies** and received multiple National Healthcare Quality Awards.
- Awarded the National Healthcare Quality Gold Award for '**Genetic Diagnosis and Precision Treatment of Hereditary Skin Rare Diseases**'.
- Received Smart Healthcare Solution Certification at the 25th NHQA for the '**Cross-Device Inventory System**'.
- Achieved **two** developments of technology and precision medical platforms.
- Won a total of **36** awards and certifications at the 24th NHQA, including the ' **Institution-Wide Smart Hospital Certification**' and '**National Healthcare Quality Awards**'.
- Executed four key SDM topics in clinical applications with a **90%** implementation rate.
- Submitted **274** journal papers and **126** conference presentations.
- Funded 348 in-house research projects and **214 external research projects.**
- In 2024, implemented **50** interdisciplinary collaboration projects and co-published **85** nternational research papers.
- Received **8** biotech research patents through inter-hospital collaborations.

Identification and Communication with Stakeholders Stakeholder Identification

Based on the results of questionnaire distribution, internal discussions by the Sustainability Development Committee, and input from external experts, as well as by referencing issues of concern to peer hospitals, the Hospital has identified stakeholder groups that may be positively or negatively impacted by its operational activities. The AA1000 SES stakeholder engagement standard（Stakeholder Engagement Standards） was adopted, using the five principles of “Responsibility, Influence, Tension, Diverse Perspectives, and Dependency” for scoring and ranking. Through this process, the Hospital identified seven key stakeholder groups: government agencies, internal colleagues (volunteers), patients and their families/patient groups, academic and research institutions, suppliers/outsourcers/contractors, students/interns, and external evaluation institutions.





Stakeholder Communication

NCKU Hospital places great importance on stakeholder rights and interests. To understand stakeholders' levels of concern regarding the Hospital's sustainability issues, a diversified and systematic stakeholder communication platform has been established. In addition to the "Cheng Kung Window Employee Feedback Platform" and the "Employee Communication Forum" within the HR system for staff to raise concerns, the Hospital also provides the "Superintendent's Mailbox" on the official website. The table below outlines the Hospital's communication channels and outcomes for each stakeholder group:

Communication Channels and Effectiveness with Stakeholders

Stakeholders	Stakeholders' Significance to the Hospital	Communication Channels	Frequency	Communication Effectiveness
Government Agencies	As a national medical center, the Hospital strictly abides by national regulations, actively supports and cooperates with central and local competent authorities in formulating health policies, and continues to improve, optimize, and innovate various medical services. Patient safety and service quality are constantly enhanced and affirmed through various accreditations and evaluations.	Official documents	Irregular	◉ In 2024, a total of 73 awards were received for promoting medical quality or patient safety activities ◉ In 2024, the Home Nursing Institution and Long-Term Care Category A unit passed evaluations ◉ In 2024, a total of 339 official documents were submitted to patients' household registration offices or local authorities to apply for related subsidies ◉ In 2024, a total of 27 official documents were submitted to the Household Registration Office for access to household registration records ◉ In 2024, the Ministry of Health and Welfare's "e Care Together" system reported 520 protective cases and 61 Social Safety Net cases ◉ In 2024, a total of 19 official documents were submitted to the Social Affairs Bureau to assist in patient discharge placements ◉ In 2024, a total of 1,200 official documents were submitted to the Ministry of Health and Welfare regarding organ donation consent forms; 1,562 palliative care intention forms were submitted.
		Various online and physical meetings	Irregular	
		Visits	Irregular	
		Various certifications, inspections, supervisions, and evaluations	Irregular	
		Email	Real-time	
		Phone or fax	Real-time	
		Messaging software/Line	Real-time	
		Long-term care institution supervision	Annually	
		Long-term care institution evaluation	Biennially or quadrennially	
		On-site assessments by the Ministry of Health and Welfare, Ministry of Digital Affairs, Ministry of Education, etc.	Irregular	

Communication Channels and Effectiveness with Stakeholders

Stakeholders	Stakeholders' Significance to the Hospital	Communication Channels	Frequency	Communication Effectiveness
Internal Staff (Volunteers)	Employees are the most valuable asset of the Hospital. Whether physicians, nurses, medical technologists, administrative staff, or volunteers, all form the solid foundation for delivering quality medical services. The Hospital is committed to enhancing employees' professional skills and work motivation through diverse training and supportive resources, while actively aligning with policies set by competent authorities at all levels to fulfill public medical responsibilities. We aim to build the most ideal environment for teaching, research, and work in the minds of healthcare professionals, and continue striving toward excellence in medical quality and sustainable development goals.	Email	Real-time	◉ In 2024, a total of 3,454 employees participated in the employee satisfaction survey, with an overall response rate of 76.26% and a satisfaction rate of 88.70%. ◉ In 2024, eight AI training workshops for healthcare staff were held, with a total of 108 participants. ◉ In 2024, onboarding training for new nurses was completed by 149 participants, with a total of 288 training hours; clinical unit training reached 25,185 participants, totaling 29,875 hours. ◉ The satisfaction rate for on-the-job training at the Infection Control Center reached 90%. ◉ In 2024, a total of 13 newcomer forums were held. ◉ In 2024, the attendance rate of the Occupational Safety and Health Committee members exceeded 80%; the proposal resolution rate also exceeded 80%. ◉ The educational training completion rate for members of the Occupational Safety and Health Committee reached 100%. ◉ In 2024, eight employee-raised issues were discussed and consensus-built in consultation meetings.
		Telephone	Real-time	
		Website	Real-time	
		Employee Communication Platform	Real-time	
		Labor-Management Meetings	Quarterly	
		Negotiation Meetings	Irregular	
		Employee Satisfaction Surveys	Annually	
		Hospital Affairs Meetings	Regular	
		Department (or Division) Meetings	Regular	
		Annual Performance Evaluation	Regular	
		Superintendent's Mailbox	Real-time	
		Onboarding Training for New Employees (physicians, nurses, medical technologists, administrative staff) and General Education Courses	Regular	
		Various Platform Workshops	Regular	
		Internal Audit on Information Security	Twice a year	
		In-Service Education Surveys	Monthly	
		New Employee Forums	Monthly	
		Occupational Safety and Health Committee Meetings	Once every three months	
		Verbal Feedback	Irregular	

Communication Channels and Effectiveness with Stakeholders

Stakeholders	Stakeholders' Significance to the Hospital	Communication Channels	Frequency	Communication Effectiveness
Internal Staff (Volunteers)		Once a week	Once a week	
		Irregular	Irregular	
		Once a month	Once a month	
Patients and Family Members / Patient Groups	Life, compassion, excellence, and innovation are the core values of the hospital. Centered on patients, we are committed to improving safe and high-quality medical services for the public, practicing holistic healthcare, and safeguarding patient safety.	Hospital website	Real-time	◉ In 2024, satisfaction with emergency, outpatient, and inpatient services exceeded 95% in the medical experience survey. ◉ In 2024, the Department of Nursing received 1,180 pieces of public feedback, of which 85% were positive. ◉ In 2024, social workers served a total of 3,699 individuals, averaging 308 persons served and 469 service instances per month. ◉ In the first half of 2024, the “Clinical Service Patient Experience Survey Report” showed a satisfaction rate of 96.82%; in the second half, the satisfaction rate was 96.15%. ◉ In 2024, the monthly average satisfaction score from post-health checkup surveys reached 4.84 out of 5. Improvement measures for negative feedback reached 100%. ◉ In 2024, 100% of complaint cases from examinees at the Health Management Center were resolved. ◉ In 2024, the satisfaction rate from the patient meal survey reached 93.90%. ◉ In 2024, outpatient health education satisfaction scored 4.8 out of 5. ◉ In 2024, a total of 56 feedback or appreciation cases related to the Pharmacy Department were received.
		Email	Real-time	
		Complaint hotline / On-site complaint	Real-time	
		Social media	Real-time	
		Patient satisfaction survey	Real-time	
		Outpatient, emergency, and inpatient experience survey	Biennially	
		Hospitalization guide / Health education manual	Real-time	
		Superintendent's Mailbox / Suggestion box	Real-time	
		Customer feedback	Irregular	
		Patient meal satisfaction survey	Annually	
		Outpatient Nutrition Consultation Satisfaction Survey	Real-time	

Communication Channels and Effectiveness with Stakeholders

Stakeholders	Stakeholders' Significance to the Hospital	Communication Channels	Frequency	Communication Effectiveness
Academic and Research Institutions	NCKU Hospital undertakes the dual responsibilities of teaching and research. Academic research is aligned with medical services, and the results are key to the sustainability of hospital operations.	Partner Institution-Related Meetings	Irregular	◉ In 2024, a total of 7 evidence-based papers were completed and received multiple National Healthcare Quality Awards. ◉ In 2024, there were 274 journal paper applications and 126 academic conference paper applications. ◉ In 2024, the Hospital subsidized a total of 348 in-house research projects. ◉ In 2024, there were 50 interdisciplinary collaborative projects within the Hospital and 85 internationally co-authored research papers. ◉ In 2024, 12 academic research activities were organized. ◉ In 2024, a total of 214 external research projects were obtained. ◉ In 2024, NCKU Hospital's research teams received 2 National Innovation Awards, 3 National Innovation Excellence Awards, and 8 certified patents, totaling 13 research awards and patents.
		Official Documents	Irregular	
		Teaching and Internship Course Review Meetings	Irregular	

Communication Channels and Effectiveness with Stakeholders

Stakeholders	Stakeholders' Significance to the Hospital	Communication Channels	Frequency	Communication Effectiveness
Suppliers/ Contractors /Outsourced Service Providers	Contractors are key stakeholders supporting hospital operations and must possess relevant professional and service skills to ensure the high service quality of NCKU Hospital.	Operations and Maintenance Meetings	Once a month	◉ In 2024, the quarterly satisfaction rate for outsourced cleaning and delivery services was 89.63%, and the inpatient satisfaction rate for ward cleaning services was 90.6%. ◉ In 2024, the satisfaction rate for public area cleaning exceeded 85%. ◉ In 2024, the satisfaction rate for security services was 94.3%. ◉ In 2024, there were zero major disasters involving in-hospital contractors. ◉ In 2024, the completion rate of health examinations for contractors reached 100%. ◉ In 2024, the completion rate for occupational safety and health education and training exceeded 90%.
		Employee Satisfaction Survey	Twice a year	
		Telephone	Real-time	
		Outsourced Partner Exchange Meetings	Quarterly	
		Satisfaction Questionnaire Responses	Quarterly	
		Contractor Coordination Organization Meetings	Once every three months	
		Contractor Written Evaluations (Affidavits)	Once every three months	
		Contractor Safety Inspections	Irregular	
		Consumable Satisfaction Survey	Once a month	
		On-Site Audit of Laundry Plant	Every two months or irregular	
		Regular Coordination and Review Meetings between Sewing Unit and Nursing Department	Every two months or irregular	
		Contractor Safety Meetings	Quarterly	
		Follow-up on Delayed Deliveries and Returns of Defective Products	Real-time	
		Audit Inspections	Real-time	

Communication Channels and Effectiveness with Stakeholders

Stakeholders	Stakeholders' Significance to the Hospital	Communication Channels	Frequency	Communication Effectiveness
Students/ Interns	Medical students and interns from various professions are the core pillars of the future healthcare industry. Therefore, we are committed to education and talent cultivation, and have developed comprehensive and diverse training programs. Through the integration of theoretical knowledge and clinical skills, we help students deepen their professional capabilities, foster a sense of medical ethics, and enhance interdisciplinary communication and collaboration skills. This training mechanism not only nurtures outstanding medical talents but also improves the quality of healthcare services, promotes mutual growth between the hospital and its faculty and students, and ultimately returns the outcomes to clinical care, benefiting a broad range of patients.	Internship Unit Satisfaction Survey	Real-time	◉ In 2024, a total of 1,209 nursing interns participated, with an average satisfaction score of 4.82 (out of 5). ◉ In 2024, interns across various disciplines reported an average satisfaction score of over 4.7 (out of 5) for the training provided by the hospital. ◉ In 2024, four regular intern discussion meetings were held. ◉ In 2024, 125 PGY (Postgraduate Year General Medical Training) physicians completed their training with a 100% completion rate and a 98% satisfaction rate. ◉ In 2024, 85 medical interns participated in the OSCE exam, with a pass rate of 98.7%.
		Joint Internship Review Meeting	Annually	
		Intern Medical Student Internship Satisfaction Survey	After each departmental internship	
		Pre-internship Orientation Satisfaction Survey for Intern Medical Students	Annually	
		Intern Medical Student Forum	Twice a year	
		Internship Period Forums by Departments (Medical Students)	Irregular	
		Clinical Medical Education Committee	Once every quarter	
		Verbal or Written Feedback	Irregular	
		Email	Irregular	
		Teaching Questionnaire Survey	Irregular	
		Teaching Center Mailbox	Irregular	

Communication Channels and Effectiveness with Stakeholders

Stakeholders	Stakeholders' Significance to the Hospital	Communication Channels	Frequency	Communication Effectiveness
External Evaluation Agencies	To enhance medical quality and patient safety, NCKU Hospital is committed to various medical certifications and evaluations. Through recognition by external third parties, the Hospital actively realizes its vision of holistic care and a smart hospital. In addition, the Hospital conducts quality management in accordance with the quality certification indicators for health examinations set by the Joint Commission of Taiwan (JCT), thereby improving overall service quality.	Smart Hospital Institution-Wide Mark Certification	Regular	◉ Awarded World's Best Smart Hospitals. ◉ Passed the Ministry of Health and Welfare's hospital infection control audit annually. ◉ Certified for stroke care in 2024. ◉ Maintained medical center accreditation every four years; passed the 2024 hospital and teaching hospital accreditation, receiving certificates for "Excellent Hospital Accreditation (Medical Center)" and "Teaching Hospital Accreditation (Medical Center)". **2024 Quality Competitions** ◉ TAIWAN NHQA：Won Thematic Gold Award and Creativity Award; 7 Honorable Mentions; Systematic Excellence Center Award; Evidence-Based Medicine Gold (1), Silver (1), Bronze (1), Merit (2), and Honorable Mention (1); Simulation Scenario Silver and Bronze Awards; Smart Healthcare Solution Bronze Award and Mark; Outstanding Healthcare Gold Award. ◉ Symbol of National Quality (SNQ) by IBMI: Awarded Marks in Specialty Medicine and Community Service categories. ◉ TQCC by CCHQ: Won Silver Pagoda Award, Bronze Pagoda Award, Lean Elite Potential Award, and Southern Regional President's Award. ◉ TQIP by TMHA: Won Bronze in Quality Improvement Category, Best Innovative Topic Award, Honorable Mention and Finalist in Quality Improvement, Honorable Mention in Indicator Monitoring, Gold and Honorable Mention in Poster Category. ◉ QIP Presentation Competition by TQIA: Won Gold, Silver, and Bronze QIP Awards.
		Hospital Accreditation / Healthcare Quality Certification	Regular	
		Quality Competitions	Regular	
		Email	Real-time	
		Official Documents	Real-time	
		Meetings	Irregular	
		Telephone	Real-time	
		Visits	Irregular	
		Infection Control Audits	Annually	
		External ISO 27001 Information Security Audit	Annually	
		Joint Commission of Taiwan Hospital Accreditation—Grade A	Once every four years	

Material Topics for Sustainable Development

In accordance with the GRI Standards (2021), the Hospital has established a framework for materiality analysis of sustainability issues by following five key steps: “Understanding the Organization’s Context,” “Identifying Impacts,” “Assessing Significance,” “Determining Material Topics,” and “Defining Topic Boundaries.” A sustainability topic list was created by referencing disclosure metrics for the healthcare services industry from SASB and sustainability practices of peer institutions. Material topics were determined through discussions among departmental representatives, senior management, and external experts and scholars. These topics reflect both stakeholder concerns and their significant economic, environmental, and social (including human rights) impacts on the Hospital’s sustainable operations and serve as the basis for information disclosure in the report. The materiality identification process for the 2024 report is as follows：

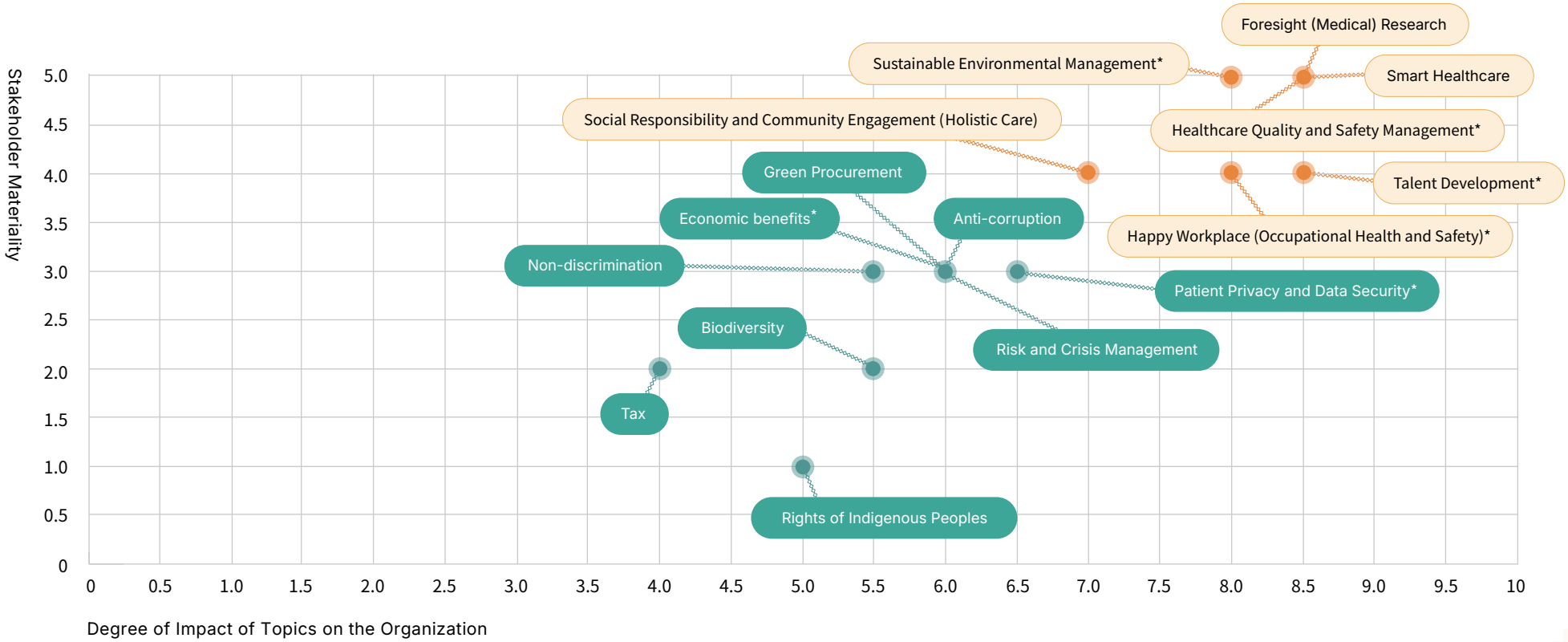
Materiality Identification Process for the 2024 Report

1	**Understanding the Organizational Context and Collecting Sustainability Topics**	To understand the organizational context and collect sustainability topics, the Hospital referred to topic standards published by the Global Reporting Initiative (GRI), SASB, SDGs, etc., and consolidated them into 16 sustainability topics across three major aspects: Economic (including Corporate Governance), Environmental, and Social (including Human Rights).	**3 major aspects of sustainability** **16 sustainability topics**
2	**Identifying Actual and Potential Impacts**	External experts assessed the Hospital’s actual or potential negative impacts and positive contributions to the economy, environment, and society for each topic.	**7 material topics**
3	**Assessing the Significance of the Impacts**	Each topic’s total score was calculated by summing the scores for positive impact, negative impact, and stakeholder concern level across the economic, environmental, and social dimensions. Topics with a total score greater than 7 and stakeholder concern level over 4 were deemed to have significant impacts.	
4	**Validating and Confirming Material Topics**	Through discussion at the monthly Sustainability Development Committee meetings, 7 material topics were determined as priorities for disclosure in this report.	
5	**Defining Material Topic Boundaries**	The boundaries of the material topics were analyzed based on the value chain. The Hospital will continue to enhance its management of these topics and disclose relevant information in the sustainability report.	**Value chain as the element for boundary analysis**

Results of Material Topic Identification

The materiality assessment process took into account the overall external economic, environmental, and social demands, and evaluated the expectations and concerns of international sustainability advocacy organizations and stakeholders regarding the Hospital's sustainability topics. The evaluation results were discussed and confirmed by the Sustainability Development Committee. Seven topics were identified as the Hospital's material sustainability topics for 2024: Foresight (Medical) Research, Smart Healthcare, Sustainable Environmental Management, Healthcare Quality and Safety Management, Talent Development, Happy Workplace (Occupational Health and Safety), and Social Responsibility and Community Engagement (Holistic Care). These topics will be continually monitored and promoted and will serve as the basis for disclosure in future sustainability reports.

Comprehensive Impact Ranking of Material Topics for NCKU Hospital in 2024



List of Material Topics for 2024

The material topics for the 2024 Sustainability Report were confirmed through discussions with the Sustainability Development Committee and subjected to a value chain impact analysis involving seven key stakeholder groups.

Material Topic Boundary along NCKU Hospital's Value Chain

Material Topic	Corresponding GRI Topic / Customized Material Topic	Disclosure Chapter for Management Approach	Internal	External					
			Colleagues within the Hospital (Volunteers)	Volunteers/ Patient Groups	Patients and Families	Suppliers/ Contractors/ Outsourcing Providers	Academic and Research Institutions/ Interns	Government Agencies	External Evaluation Institutions
Foresight (Medical) Research	Customized Material Topic	4.1 Forward-looking Medical Research	■				□	□	□
Sustainable Environmental Management	Customized Material Topic	4.3 (Promoting Smart Healthcare)	■					□	□
Healthcare Quality and Safety Management	GRI 302: Energy GRI 306: Waste	7.2 Building a Green Hospital	■			▲		□	□

■：Direct Impact / □：Facilitating Impact / ▲：Business Behavior Impact

Material Topic Boundary along NCKU Hospital's Value Chain

Material Topic	Corresponding GRI Topic / Customized Material Topic	Disclosure Chapter for Management Approach	Internal	External					
			Colleagues within the Hospital (Volunteers)	Volunteers/ Patient Groups	Patients and Families	Suppliers/ Contractors/ Outsourcing Providers	Academic and Research Institutions/ Interns	Government Agencies	External Evaluation Institutions
Healthcare Quality and Safety Management	Customized Material Topic	2.1 Medical Quality and Services	■	□	▲			□	□
Talent Development	GRI 404: Training and Education	5.1 Cultivating Medical and Nursing Talent	■				□		
Happy Workplace (Occupational Health and Safety) (Occupational Health and Safety)	GRI 401: Labor and Employment Relations GRI 403: Occupational Health and Safety GRI 405: Diversity and Equal Opportunity	6.2 Friendly Workplace	■		▲	▲			
Social Responsibility and Community Engagement (Holistic Care)	GRI 203: Indirect Economic Impacts GRI 413: Local Communities	3.1 (Responding to) Super-Aged Society	■	□				□	

■ : Direct Impact / □ : Facilitating Impact / ▲ : Business Behavior Impact

FEATURE COLUMN

Promoting Next-Generation Smart Healthcare

Digital Transformation of the Hospital

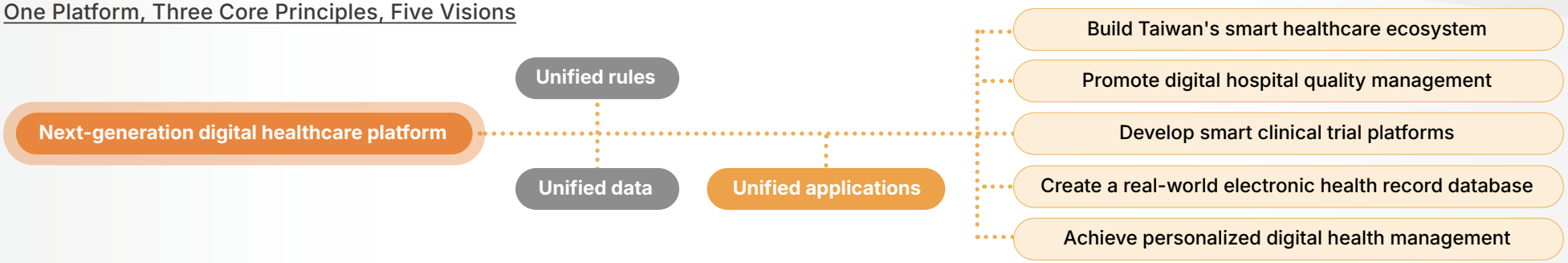
In earlier years, due to the lack of standardized formats for medical information, HIS (Hospital Information Systems) operated independently. Given the need for data security and patient privacy protection, closed databases were adopted, which limited data flow to within each system, without consideration for interdepartmental or inter-institutional data transmission. However, with the advancement of ICT and encryption technologies, digital transformation in hospitals has gradually become a major trend. The first challenge to address is the compatibility between legacy systems and new technologies.

To improve hospital operational efficiency and enhance the medical experience, the Information Office of NCKU Hospital launched the Medical Information System Renovation Project in 2009. The system was gradually upgraded to an open data architecture and introduced FHIR, enabling medical data to be transmitted across platforms and departments under the premise of protecting patient privacy. By establishing automated medical workflows, it reduces the consumption of healthcare manpower while shortening patients' waiting times, thereby improving overall service quality. Related information security measures are detailed in section "4.2 Privacy Protection."

As we enter the era of smart healthcare, data sharing and analytics become increasingly critical. Medical AI requires integration of medical data from various sources to enhance the accuracy and generalizability of its models for clinical implementation. Therefore, the hospital has proactively upgraded its IT infrastructure to accelerate data transmission and has established cloud computing and data storage platforms. By fostering close communication and collaboration among physicians, nurses, medical professionals, and IT engineers, AI technologies such as real-time diagnostic support, image interpretation, and risk prediction are becoming more feasible and can be translated from laboratory research to clinical practice.

In recent years, the Ministry of Health and Welfare has also responded to the "Healthy Taiwan" policy by actively promoting the construction of DHP (Digital Health Platform), aiming to break down information barriers between hospitals, support the integration and application of various medical data, and promote a healthy lifestyle for all citizens, thereby enhancing health care across all age groups.

One Platform, Three Core Principles, Five Visions



AI Impact Research Center

Convener of the AI Impact Research Center

National Cheng Kung University Hospital
Dr. Shen, Meng-Ru

Collect clinical data from different hospitals to estimate medical costs and help set insurance prices, speeding up health coverage approval

To realize the vision of “Establishing a Smart Healthcare Ecosystem in Taiwan” under the Next-Generation Digital Healthcare Platform Project, the Information Management Division of the Ministry of Health and Welfare collaborated with 16 hospitals to establish three types of AI centers. These centers aim to address the key challenges in implementing medical AI—deployment, certification, and reimbursement—bridging the final mile for smart healthcare in Taiwan. In 2024, NCKU Hospital received project funding to establish an “AI Impact Research Center.”

The purpose of establishing the AI Impact Research Center is to address issues related to the National Health Insurance (NHI) reimbursement standards for smart medical devices, ensuring that AI products demonstrate both clinical effectiveness and health benefits, while also providing a scientific basis for pricing. NCKU Hospital was selected from among many medical centers due to its long-standing efforts in medical information systems and AI applications in imaging, its abundant clinical data, and the strong interdisciplinary and academic resources of National Cheng Kung University as a research-intensive comprehensive university. Moreover, NCKU Hospital has partnered with the Tri-Service General Hospital to build a cross-institutional collaboration platform for data sharing. The proposal was highly regarded by the project review committee, with President Shen Meng-Ru of NCKU serving as the project convener for the AI Impact Research Center.

Team Members of the AI Impact Research Center

Northern Taiwan	National Taiwan University Hospital
	Taipei Veterans General Hospital
	Tri-Service General Hospital, Outpatient Services for the Public
Central Taiwan	Taichung Veterans General Hospital
Southern Taiwan	National Cheng Kung University Hospital

FEATURE COLUMN

Promoting Next-Generation Smart Healthcare

The hospital will leverage its strengths in integrating clinical and academic resources by bringing together cross-disciplinary experts to establish the AI Impact Research Center. The center is led by Vice Superintendent Ko Wen-Chien and supported by a multidisciplinary team consisting of clinical physicians specializing in clinical trials, epidemiologists, biostatisticians, healthcare information engineers, and health economists. Through hospital alliance collaboration, the center will carry out clinical trials and health economic analyses. The research results will provide robust scientific evidence for reimbursement decisions or pricing, accelerating the widespread adoption of medical AI and becoming a key driver in advancing the national AI healthcare industry.

The AI Impact Research Center will also serve as a liaison with the NHI Administration's designated single-window mechanism. Medical AI developers with TFDA (Taiwan) or FDA (U.S.) approval may seek recommendations from the NHI Administration, and then work with the center to design and implement clinical trials aligned with those recommendations. The center will also evaluate cost-effectiveness and financial impact, supplying data for the NHI Administration's HTA (Health Technology Assessment) team to determine whether the product should be included in NHI coverage and at what reimbursement level.

1

Chapter

NATIONAL CHENG KUNG UNIVERSITY HOSPITAL – SUSTAINABLE OPERATIONS

1 National Cheng Kung University Hospital – Sustainable Operations

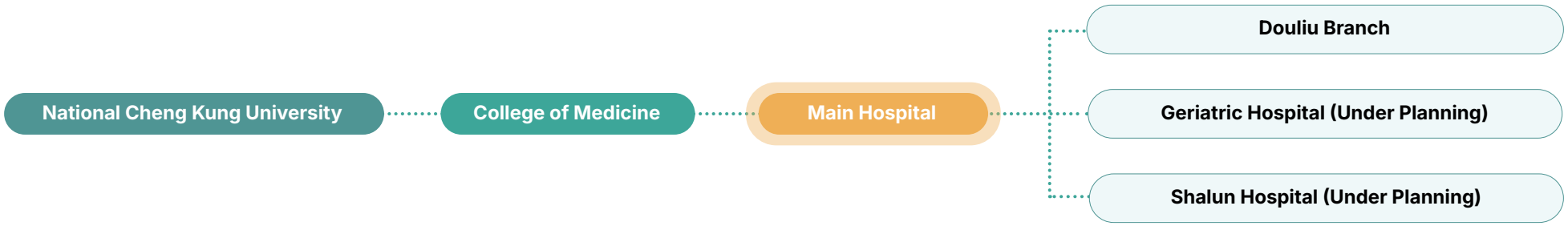
In the global trend of accelerating toward net-zero carbon emissions and promoting ESG sustainable development, National Cheng Kung University Hospital (NCKUH) actively engages with forward-looking thinking, demonstrating a strong commitment to sustainable governance. To align with Taiwan's 2050 net-zero emissions goal and the Sustainable Development Goals (SDGs), NCKUH signed the "Hospital Sustainability Development Initiative" with TAISE on December 4, 2024, covering several core areas, including strengthening operational management mechanisms, promoting smart healthcare innovation, fostering a friendly workplace environment, implementing environmental protection actions, and deepening social engagement and responsibility, officially launching a new chapter in sustainable collaboration.

1.1 Governance and Supervision

Organizational Structure

To address diverse needs such as elderly care, pediatric critical care, smart healthcare, and disaster response, enhancing healthcare accessibility and social impact has become an essential component. NCKUH has developed a multi-campus structure with a clearly defined medical network system, which currently includes the main hospital, Douliu Branch, and the planned construction of the Geriatric Hospital and Shalun Hospital, gradually forming a regionally distinctive and functionally diverse medical system.

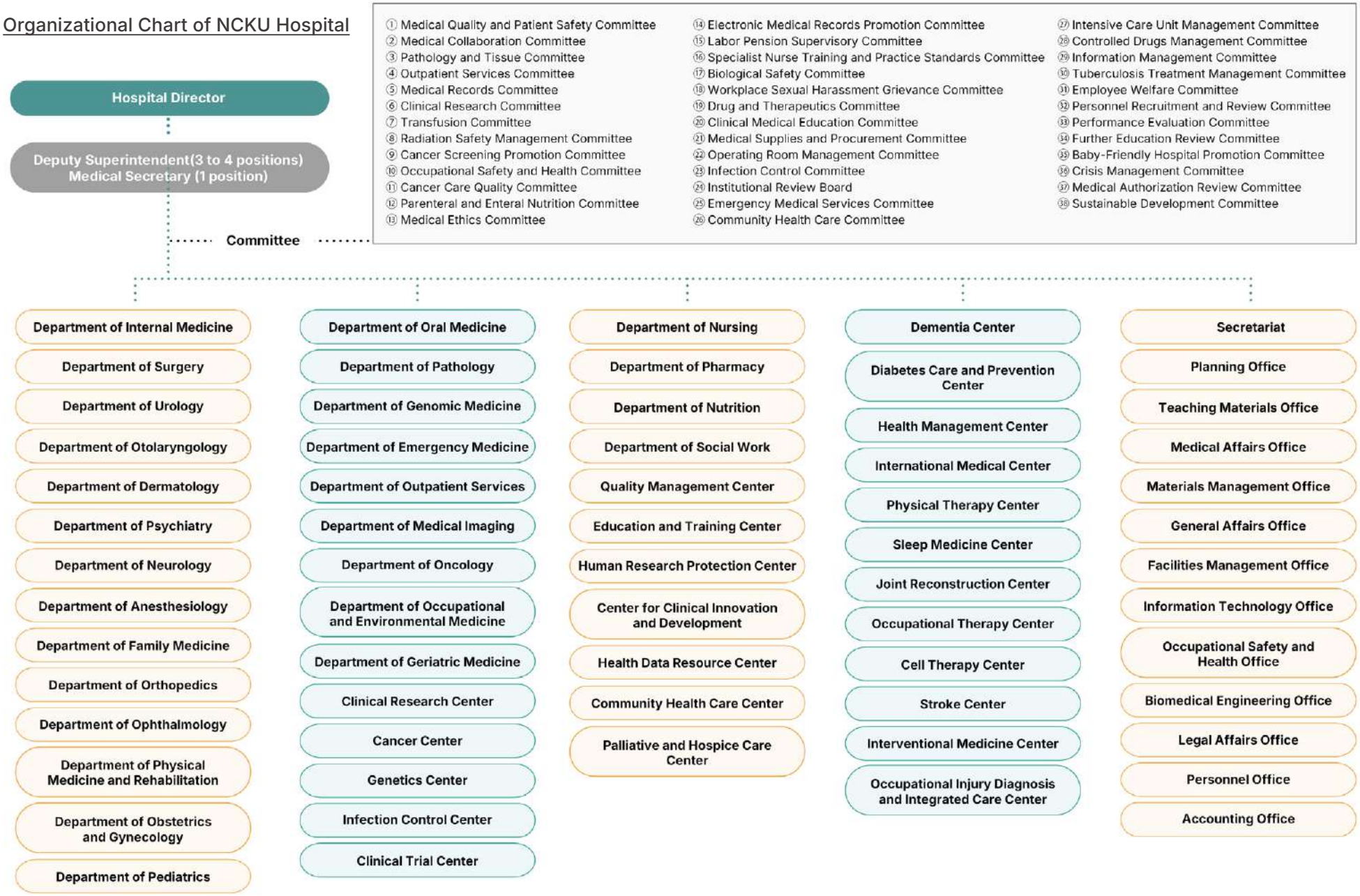
Organizational Structure



To support the effective operation of multi-campus medical services, National Cheng Kung University Hospital (NCKUH) has established a sound organizational structure and governance mechanism. With the goal of advancing medical service quality, patient safety, employee well-being, environmental sustainability, and effective organizational governance, NCKUH, in accordance with relevant regulations and healthcare institution governance principles, has set up a headquarters and various specialized units. It adopts an operational model of "comprehensive planning and specialized division," promoting clinical healthcare, teaching and research, and quality improvement efforts. The current organizational structure includes 28 medical departments, 16 task centers, 3 medical affairs units, and 17 administrative departments. According to specialties, it has established 28 clinical and support units, such as the Department of Internal Medicine, Department of Surgery, Department of Obstetrics and Gynecology, and Department of Pediatrics. In addition, multiple cross-departmental professional centers have been established, such as the Cancer Center, Genetic Center, and Clinical Trial Center, to actively promote precision medicine, interdisciplinary integrated care, and clinical research development.

Furthermore, 38 dedicated hospital-wide committees have been formed as supervisory and management mechanisms, responsible for policy formulation, execution, and supervision. These committees comprehensively cover hospital operations, development strategies, medical quality, patient safety, innovation and research, and ESG-related topics. Each committee is convened by a member of the Office of the Superintendent, with senior executives or their representatives serving as committee members. Depending on the committee's scope, data relevant to hospital management, patient safety, and medical quality are collected to ensure the safety and effectiveness of healthcare services and the overall efficiency of organizational operations. These efforts continue to refine the quality of medical services, enhance the hospital's overall competitiveness, and fulfill its commitment to sustainable operations and social responsibility.

Organizational Chart of NCKU Hospital



Supervisory Mechanism

National Cheng Kung University Hospital (NCKUH) is affiliated with the College of Medicine of National Cheng Kung University and serves as a vital base for its clinical education, medical services, and research development. The overall development direction of the Hospital not only aligns with clinical medical needs but also responds to the educational policies and strategic goals of both the College of Medicine and the University headquarters, demonstrating a high degree of integration and coordination between their governance structures. Although the Hospital is managed by an operating team, its highest-level guidance and supervision are carried out by a supervisory team established by National Cheng Kung University. This team reviews major changes, executive appointments, and operational plans in accordance with organizational regulations, and submits them to National Cheng Kung University for final approval, ensuring regulatory compliance and sustainable development.

The “Supervisory Team of Medical Institutions of National Cheng Kung University” is composed of two types of members: standing members and expert members.

The standing members are chaired by the University President and include representatives from the University, three impartial professionals from various fields, and one employee representative. The term of appointment is up to two years and may be renewed. Expert members are invited by the University President based on the theme of each supervisory and joint meeting to participate and provide key policy or project-related recommendations. Through participation in the University Affairs Meeting, Administrative Meeting, Executives Meeting, and University Development Committee of National Cheng Kung University, the supervisory team remains fully informed of overall university development planning. It also maintains close interactions with the College of Medicine’s Faculty Affairs Meeting and Administrative Executive Meetings, ensuring that the Hospital’s operational strategies align with the academic system’s development direction. The Superintendent and Deputy Superintendents also actively participate in various internal meetings, including the Faculty Affairs Meeting, Medical Affairs Meeting, and Executive Growth Camp. Meeting participants often have professional backgrounds in management, research and development, and information technology, enhancing foresight and execution in decision-making and strengthening the overall governance effectiveness.

In addition, the Hospital has established a “Joint Meeting” system, serving as a key communication and coordination platform between the supervisory and operating teams. It covers diverse topics such as patient-centered high-quality medical care, effective organizational management, interdisciplinary collaboration, enhancement of teaching quality, talent cultivation, smart healthcare, sustainable development, and innovative technologies, providing essential guidance for future development planning.

Overview of Meetings Related to the Supervisory Team			
Meeting Name	**Convener**	**Frequency**	**Overview of Participants**
Joint Meeting	University & Hospital	Quarterly	Supervisory Team and the Hospital's Operating Team

Overview of Meetings Related to the Operating Team			
Meeting Name	**Convener**	**Frequency**	**Overview of Participants**
Hospital Affairs Meeting	Superintendent	Monthly	Deputy Superintendents, Medical Secretary, Branch Hospital Superintendents, Department Heads of all units, Resident Physician Representative; University President and Dean of the College of Medicine are also invited to attend
Medical Affairs Meeting	Superintendent	Monthly	Deputy Superintendents, Medical Secretary, Branch Hospital Superintendents, Supervisors of clinical, medical, and administrative units; University President and Dean of the College of Medicine are also invited to attend
Executive Growth Camp	Superintendent	Once or twice a year	Deputy Superintendents, Medical Secretary, Branch Hospital Superintendents, Superintendents of strategic alliance hospitals, Department Heads of all units, Subspecialty Chiefs of Clinical Departments

Oversight Team Member Profile Table

Name	Gender	Age	Main Education & Experience	Industry Experience	Professional Expertise
Dr. Shen, Meng-Ru	Male	Above 50	**Education** ◉ M.D., Kaohsiung Medical University ◉ D.Phil., University of Oxford **Experience** ◉ Superintendent & Vice Superintendent, NCKU Hospital ◉ Vice Dean for Research, College of Medicine, NCKU ◉ Director, Institute of Pharmacology, NCKU	◉ ESG Governance ◉ Industry-Academia Collaboration Promoter ◉ International & Cross-Disciplinary Cooperation	◉ Nephrology & Cross-Team Governance ◉ Academic & Research Leadership ◉ Interdisciplinary Integration & Innovation
LI, CHUN-CHANG, Vice President	Male	Above 50	**Education** ◉ M.S. and Ph.D., Graduate Institute of Environmental Engineering, National Taiwan University **Experience** ◉ Vice President and Spokesperson, National Cheng Kung University ◉ Distinguished Professor, Institute of Industrial Hygiene and Environmental Medicine, NCKU ◉ Director, Advanced Shrimp Aquaculture R&D Center, NCKU ◉ Deputy Director, Health Service and Digital Governance Office, NCKU	◉ ESG Governance ◉ Practical Application of Occupational Safety and Health Technologies ◉ Talent Cultivation	◉ Air Pollution Control and Environmental Monitoring ◉ Academic and Research Leadership ◉ Participation in Professional Communities and Journal Review
Shen, Yen-Sheng Dean of College of Medicine	Male	Above 50	**Education** ◉ Ph.D., Institute of Clinical Medicine, National Cheng Kung University ◉ M.D., Post-baccalaureate Program in Medicine, College of Medicine, National Cheng Kung University **Experience** ◉ Dean, College of Medicine, National Cheng Kung University ◉ Distinguished Professor and Director, Institute of Clinical Medicine, NCKU ◉ Joint Professor, Department of Surgery, College of Medicine, NCKU	◉ ESG Governance ◉ Builder of Industry-Academia-Research Innovation Platforms ◉ Talent Cultivation	◉ Oncology Expertise and Cross-Disciplinary Team Leadership ◉ Academic and Research Leadership ◉ Promotion of Medical AI and Smart Healthcare Integration

Oversight Team Member Profile Table

Name	Gender	Age	Main Education & Experience	Industry Experience	Professional Expertise
Chang, Yu-Heng Professor, College of Management	Male	Above 50	**Education** ◉ Ph.D., Department of Civil Engineering, University of Pennsylvania ◉ M.S., Transportation Engineering, National Chiao Tung University **Experience** ◉ Honorary Professor, Institute of Transportation Management, National Cheng Kung University ◉ Dean, College of Management, National Cheng Kung University ◉ Consultant and Board Director, China Airlines Development Foundation ◉ Deputy Superintendent for Administration, National Cheng Kung University Hospital	◉ ESG Governance ◉ Talent Cultivation ◉ Industry-Academia Collaboration and Consulting Services	◉ Aviation Transportation Management ◉ Academic Research and Publication Capacity ◉ Urban Mass Transportation Management
Yeh, Chyi-Hsin Chief Technology Officer	Male	Above 50	**Education** ◉ M.S., Department of Industrial Engineering and Management, University of Iowa, USA ◉ B.S., Department of Aeronautics and Astronautics Engineering, National Cheng Kung University **Experience** ◉ Convener, Phoenix Innovation Platform Preparatory Committee, National Cheng Kung University ◉ Digital Transformation Consultant, Clinical Innovation R&D Center, National Cheng Kung University Hospital ◉ Chief Innovation Officer, CTCI Corporation	◉ Research and Development ◉ Startup Acceleration and Entrepreneurship Mentorship ◉ International Exchange and Cross-Domain Collaboration	◉ Digital Transformation and Medical ICT Applications ◉ Cloud Integration Platform Development ◉ Financial Technology

Oversight Team Member Profile Table

Name	Gender	Age	Main Education & Experience	Industry Experience	Professional Expertise
Lo, Chih-Hsien Chairman, Uni-President Enterprises Corporation	Male	Above 50	**Education** ◉ Bachelor's Degree, Department of Foreign Languages and Literature, National Cheng Kung University ◉ MBA, University of California, Los Angeles (UCLA) **Experience** ◉ Account Executive, Taiwan Advertising Co. ◉ Business Manager, DeBeers Taiwan Office ◉ Section Chief and Assistant Manager, Overseas Department, Uni-President ◉ Special Assistant, Uni-President Shanghai Headquarters; Associate Manager, Cold Chain Business Group	◉ ESG Governance ◉ Crisis Response and Transformation Management ◉ Market Strategy and Competitive Advantag	◉ Brand Management and Marketing Strategy ◉ Cross-Border Operations and Market Expansion Capabilities ◉ Corporate Transformation and Strategic Focus
Kuo, Hai-Pin Chairman, Li-Chia Industrial Co., Ltd.	Male	Above 50	**Education** ◉ Master's Degree, Graduate Institute of Management, National Cheng Kung University ◉ Master's Degree, Graduate Institute of Mechanical Engineering, Kun Shan University of Technology **Experience** ◉ Plant Director, Kaolin Plant ◉ President, Kun Shan University Alumni Association	◉ ESG Governance ◉ Smart Manufacturing and R&D ◉ International Exchange and Cross-disciplinary Collaboration	◉ Brand Management and Marketing Strategy ◉ Multinational Operations and Market Expansion ◉ Green Energy Technology Development

Oversight Team Member Profile Table

Name	Gender	Age	Main Education & Experience	Industry Experience	Professional Expertise
Hou, Ming-Feng Professo	Male	Above 50	**Education** ◉ School of Medicine, Kaohsiung Medical University **Experience** ◉ President, Taiwan Surgical Association ◉ Superintendent, Kaohsiung Medical University Chung-Ho Memorial Hospital ◉ Superintendent, Kaohsiung Municipal Hsiao-Kang Hospital ◉ Superintendent, Kaohsiung Municipal Ta-Tung Hospital	◉ ESG Governance ◉ R&D and Patent Application ◉ International Exchange and Cross-disciplinary Collaboration	◉ ESG Governance ◉ R&D and Patent Application ◉ International Exchange and Cross-disciplinary Collaboration
Chan, Shih-Hung Physician	Male	Above 50	**Education** ◉ Ph.D., Institute of Clinical Medicine, National Cheng Kung University ◉ M.B.A., Executive Master's Program, College of Management, National Cheng Kung University **Experience** ◉ Clinical Professor, Department of Medicine, National Cheng Kung University ◉ Attending Physician, Division of Cardiovascular Medicine, Department of Internal Medicine, NCKU Hospital ◉ Deputy Secretary-General, Taiwan Society of Interventional Cardiology ◉ Clinical Associate Professor, Department of Medicine, National Cheng Kung University	◉ ESG Governance ◉ Talent Cultivation ◉ Domestic and International Case Competitions	◉ Cardiology and Cross-specialty Team Governance ◉ Academic and Research Leadership ◉ Precision Medicine and Clinical Case Database Development

Governance Mechanism

To ensure the sustainable development and stable leadership of the hospital, the Hospital has institutionalized procedures for the selection of the Superintendent in accordance with the “Regulations for the Organization of the National Cheng Kung University Hospital,” the “Regulations for the Selection of the Superintendent of National Cheng Kung University Hospital,” and the “Regulations on the Term and Qualifications for Concurrent Appointments of Superintendents, Deputy Superintendents, and Heads of Medical Units in Medical Institutions Affiliated with the Ministry of Education.”

When the position of Superintendent becomes vacant or five months before the term expires, the Dean of the College of Medicine shall convene and form a Selection Committee to begin the selection process. The Selection Committee consists of nine members with diverse backgrounds in school administration, education, and clinical practice to ensure a fair, just, and professionally representative process. In addition, candidates for the Superintendent position must hold a professorship in a College of Medicine and possess a physician’s license issued by the Republic of China. The selection process includes public recruitment, confirmation of nomination intention, interviews, and comprehensive evaluation. Evaluation criteria include clinical education philosophy, administrative coordination capabilities, hospital management abilities, service performance, moral integrity, and health status. The Dean of the College of Medicine shall recommend the final candidate to the University President for appointment.

The term of office and related management systems of the Superintendent are critical elements for decision-making continuity and organizational stability, forming the core of hospital governance. National Cheng Kung University Hospital follows institutional regulations that clearly define the Superintendent’s term of office, reappointment conditions, and dismissal procedures. These rules balance leadership flexibility with oversight mechanisms to strengthen the governance framework and ensure sound organizational operations and clear accountability. Key points are summarized below:

Item	Description
Term Length	Three years
Reappointment	May be reappointed once
Reappointment Terms	A Reappointment Committee must be formed six months prior to term expiration. Approval requires two-thirds attendance and two-thirds approval.
Dismissal Terms	Upon proposal by more than half of the College of Medicine representatives or all staff, and approval by two-thirds attendance in the Hospital Affairs Meeting, the proposal shall be submitted to the University President for approval.

Four Deputy Superintendents are additionally appointed to assist in hospital affairs. The Superintendent shall recommend qualified candidates to the Dean of the College of Medicine, who will then submit the recommendation to the University President for appointment or concurrent service. The Office of the Superintendent leads the management team annually in formulating the hospital's strategic objectives, short-, mid-, and long-term development plans, institution-wide quality improvement, and patient safety plans. These initiatives are aligned with national policies to promote bidirectional referral systems, elevate regional medical standards, and implement the goal of a hierarchical medical care system.

Management Team Member Information

Name	Gender	Age	Inauguration Date	Primary Academic and Professional Background
Superintendent Lee, Ching-Wei	Male	Above 50	2023/5/1	Department of Medicine, National Taiwan University
Deputy Superintendent Ko, Wen-Chien	Male	Above 50	2019/8/1	Department of Medicine, Kaohsiung Medical University
Deputy Superintendent Hsu, Keng-Fu	Male	Above 50	2023/8/1	Ph.D., Institute of Clinical Medicine, National Cheng Kung University
Deputy Superintendent Hsu, Chih-Hsin	Male	Above 50	2023/8/1	Ph.D., Institute of Clinical Medicine, National Cheng Kung University
Deputy Superintendent Cheng, Hsiu-Chi	Male	Above 50	2023/8/24	Ph.D., Institute of Clinical Medicine, National Cheng Kung University

Performance and Compensation

As a public medical institution, the salary structure of NCKU Hospital follows the operational procedures outlined in the "Personnel Expenses – Salary Integration Examples across Functions" issued by the Directorate-General of Budget, Accounting and Statistics, Executive Yuan. Statutory remuneration for civil servants is handled in accordance with the "Civil Servant Pay Act," the "Regulations for Civil Servants' Allowances and Remuneration," and the "Guidelines for Remuneration of National Military, Civil, and Teaching Staff" promulgated by the Executive Yuan.

Additionally, bonuses are granted in accordance with the "Guidelines for Incentive Bonuses of Hospitals Affiliated with National Universities under the Ministry of Education." Profit-sharing bonuses are issued based on operational performance, and the Hospital has established separate operational regulations for performance incentive bonuses to ensure the principles for bonus disbursement are clearly defined.

Sustainable Development Committee

In active response to Taiwan's 2050 Net Zero Emissions policy and the SDGs, NCKU Hospital established the Sustainable Development Committee in January 2025. The Committee analyzes sustainability issues related to governance, environmental, and social aspects, aligning these with the Hospital's operational core, research innovation, and medical services to formulate strategic directions and implement key projects.

The Committee comprises 19 members, mainly drawn from department heads and designated personnel within the Hospital, covering diverse fields to ensure comprehensiveness and professionalism in policy planning and implementation. The President of the Hospital serves concurrently as the Chairperson, and a Vice President appointed by the President serves as Vice Chairperson. The Director of the General Affairs Office and the Director of the Construction and Maintenance Office serve as ex-officio members. Other committee members are appointed from heads of relevant departments. Additionally, one Executive Secretary and several officers are designated to coordinate all affairs of the Committee.

The Committee's specific responsibilities are as follows：

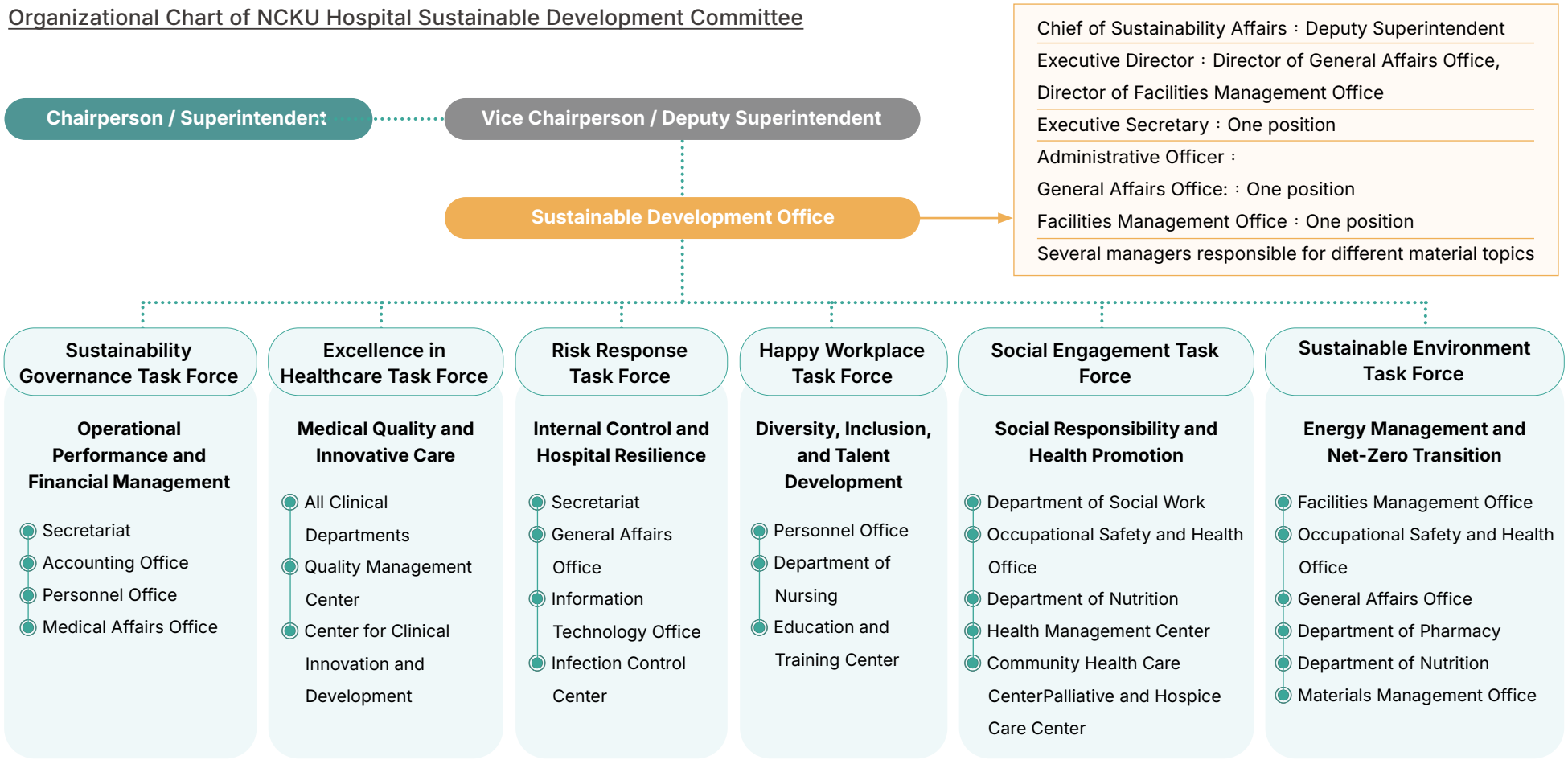
- **Coordinate and formulate policies or regulations related to the Hospital's sustainable development.**
- **Develop matters related to sustainable development education and training.**
- **Track, review, and revise the execution results of sustainable development goals.**
- **Handle other matters related to sustainable development goals.**
- **Supervise and review matters concerning sustainability disclosures and sustainability reports.**

To implement sustainability goals effectively, the Committee has established the "Sustainable Development Promotion Office" (hereinafter referred to as the Sustainability Office) and formed several task forces. These task forces are intended to stay aligned with global sustainability trends and analyze governance, environmental, and social issues in depth. Based on the core of medical services and integrating innovative thinking and service delivery models, the Committee formulates strategic sustainable development goals and implements project plans.

Six major task forces are formed based on the nature of their functions: "Sustainable Governance," "Excellence in Healthcare," "Risk Response," "Happy Workplace," "Social Participation," and "Sustainable Environment." Each task force is led by a designated leader and supported by sustainability managers, all appointed by the Hospital President.

In the future, the Hospital's sustainability report and greenhouse gas inventory report will be proposed during the inter-departmental management meetings at the University's main campus and disclosed externally upon approval, further enhancing overall sustainability governance performance.

Organizational Chart of NCKU Hospital Sustainable Development Committee



Meeting Mechanism of the Committee and Sustainability Office

Item	Sustainable Development Committee Meeting	Meetings of the Sustainability Office and Task Forces	Ad hoc Meetings
Frequency	Once every six months	Once a month	Adjusted based on actual needs

Note：Relevant professional personnel from related units may be invited to attend or provide consultation as required by business needs.

1.2 Integrity Management

Regulatory Compliance

To maintain medical quality, ensure patient safety, and enhance governance transparency, NCKU Hospital has established a comprehensive internal control and major incident response system. Through cross-departmental system design, a clear and prompt process for major incident response and communication has been constructed, not only addressing concerns from patients and stakeholders but also strengthening hospital governance and internal control effectiveness. This reflects the hospital's commitment to high-quality medical services and transparent organizational governance. The system covers two major areas—medical incidents and infection control—and, in accordance with regulations and internal management standards, any occurrence that meets the following criteria will be deemed a major violation, triggering the reporting and handling procedures:

(1) Major Medical Incidents

According to the "Regulations for Reporting and Handling Major Medical Incidents," the following are considered reportable major events：

- Wrong patient, wrong site, wrong procedure, incorrect placement of implants, or retention of foreign objects during surgery or invasive procedures
- Incorrect blood transfusion (incompatible blood type)
- Errors in medication prescription, dispensing, or administration
- Misuse of medical equipment
- Other incidents identified by the central competent authority

Healthcare institutions must complete the reporting procedure within seven working days after becoming aware of the incident.

(2) Cluster Infection Events

When suspected cluster infections occur within the hospital, an investigation will be jointly conducted by the attending infectious disease physician, infection control personnel, and the unit supervisor (e.g., team leader, head nurse). The team will confirm the cases based on case definitions, analyze the temporal, personnel, and spatial relationships, draw trend charts and infection chains, and review relevant medical records and literature to determine whether it is a cluster of infectious disease. Based on the findings, epidemic prevention response measures will be initiated.

As of 2024, NCKU Hospital has not experienced any major violations or penalties requiring reporting to the competent authorities, consistently demonstrating high standards in regulatory compliance and risk management.

In response to various major incidents, the Hospital has established multiple reporting mechanisms to allow patients and stakeholders to voice their concerns. These include the Superintendent's Mailbox, online message board, feedback forms, and dedicated telephone lines. For complaints, the designated unit will contact the complainant on the same day, provide support as needed, and document meeting records to track the progress of handling. Each case is handled by the responsible unit according to the stage of the incident and is compiled and submitted to the relevant Deputy Superintendent before being reported to the Superintendent for approval. Cases with potential for medical disputes will be handled by the “Medical Dispute Concern and Resolution Task Force” and escalated to the Superintendent for approval according to the reporting hierarchy. The handling process is as follows：

1. All feedback and complaints are collected and reviewed by the Medical Quality and Patient Safety Committee. The Quality Center handles, reviews, and reports.

2. Medical dispute cases are reviewed by the Medical Dispute Committee. The department reports the event and gives improvement suggestions.

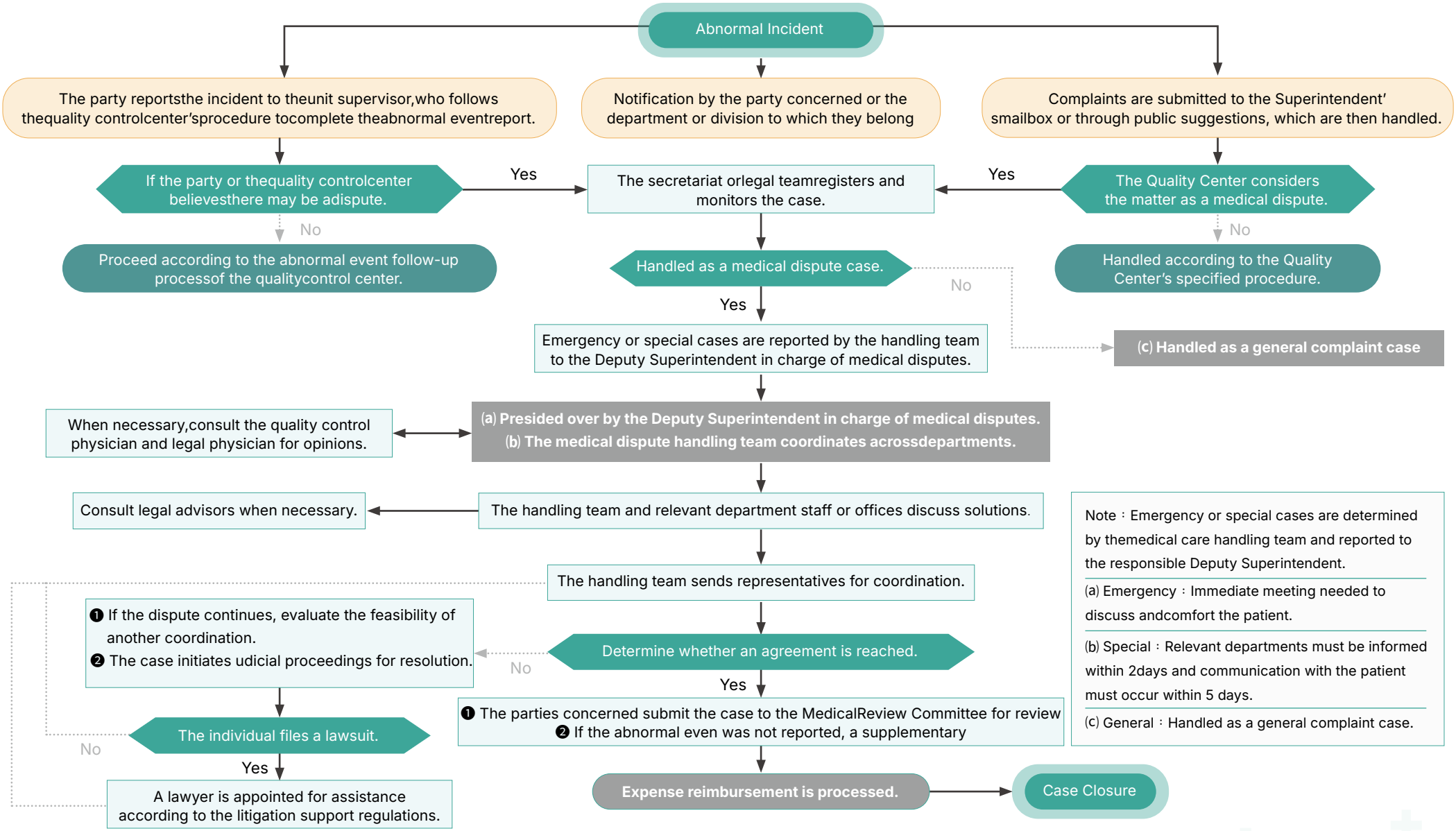
3. Infection events are evaluated by the Infection Control Center. If needed, the director reports to the vice superintendent and submits to related committees.

Statistics of Relevant Cases During the 2024 Reporting Period

Category	Major Medical Incidents	Infectious Disease Risk Events	Medical Dispute Cases
Number of Cases	0	0	18

Note：100% of medical dispute cases in 2024 were closed.

Medical Dispute Care and Handling Process of National Cheng Kung University Hospital



Conflict of Interest

NCKU Hospital adopts a governance and operations separation management structure. Hospital affairs are managed by the Executive Team, while the Oversight Team is composed of diverse members, including external professionals from various fields in addition to the university president. All members of the Oversight Team adhere to the principle of avoiding conflicts of interest, ensuring objectivity and fairness in decision-making and enhancing the transparency and accountability of the governance mechanism.

The Hospital establishes the position of Superintendent, responsible for planning and executing medical policies, operational plans, annual budgets, human resource allocation, and organizational development. Each year, the Superintendent leads the Executive Team in formulating the annual development plan as well as the hospital-wide quality and patient safety goals, which are executed upon approval by the Oversight Team.

The Superintendent is required to regularly report hospital management performance to the Oversight Team as a basis for reappointment and personnel decisions. By clearly distinguishing supervisory and executive responsibilities, NCKU Hospital effectively reduces the risk of potential conflicts of interest and strengthens the professionalism and independence of hospital governance.

Anti-Corruption Mechanism

As a legally established public hospital, NCKU Hospital upholds the principles of integrity governance and law-based administration, and is committed to the establishment and implementation of anti-corruption mechanisms. The Hospital is fully aware that corrupt practices not only damage the organization's reputation but also severely impact the quality of medical services, the rights of patients, and public trust. Therefore, the Hospital adopts a policy of "zero tolerance" toward corruption, consistently adhering to the core values of integrity, transparency, and accountable governance to strengthen its anti-corruption system and foster an honest, fair, and safe medical service environment.

1	**Corruption Risk Assessment**	In 2024, the Hospital conducted a risk assessment and did not identify any risk events throughout the year. High-risk units within the Hospital, such as the Materials Supply Division, have continuously implemented anti-corruption prevention mechanisms and conducted routine self-inspections.
2	**Internal Control System Development**	Procurement-related matters within the Hospital are strictly carried out in accordance with the Government Procurement Act, and the “Integrity Risk Business and Regular Rotation Survey” is submitted annually. Each business operation is planned with term limits and implemented with review and segregation of duties mechanisms to ensure rigorous and transparent execution of the system.
3	**Anti-Corruption Policies and Procedures**	The Hospital has established clear anti-corruption policies and conducts regular legal compliance reviews through the Legal Affairs Office. To enhance transparency, the Hospital proactively discloses major procurement information and National Health Insurance claim data, and has set up a dedicated “Integrity Section” on its website for staff and the general public. Additionally, the Hospital promotes ethics and codes of integrity, explicitly prohibiting the acceptance of kickbacks, gifts, entertainment, and the use of privileges to interfere with medical services, such as fee waivers or priority access.
4	**Education and Policy Promotion**	The Hospital promotes anti-corruption policies and regulations through various means, including announcing the "Act on Recusal of Public Servants Due to Conflicts of Interest" in the HR system and playing anti-bribery videos during election periods to raise legal awareness and risk consciousness among employees and their affiliates. Furthermore, the Procurement Division presents relevant regulations and corruption cases during monthly team meetings to reinforce compliance and alertness among staff.
5	**Reporting and Improvement Mechanism**	The Hospital has established a clear whistleblowing and complaint mechanism. Employees may file reports through the “Integrity Section” managed by the Secretariat. If a corruption incident is discovered, an independent unit will collect evidence and conduct investigations. When necessary, the Hospital will cooperate with judicial or supervisory authorities. If allegations are verified, violators will be strictly dealt with in accordance with the personnel system and evaluation committee regulations. The incident will also be publicly disclosed to alert all staff.
6	**Third-Party Management and Continuous Improvement**	For suppliers and partners, the Hospital incorporates anti-corruption clauses in contracts and implements due diligence mechanisms to ensure that the supply chain and external partners adhere to integrity principles. To foster a culture of anti-corruption, the Hospital regularly conducts compliance training and effectiveness evaluations to continually enhance its internal control system and implementation performance.

Collective Agreement

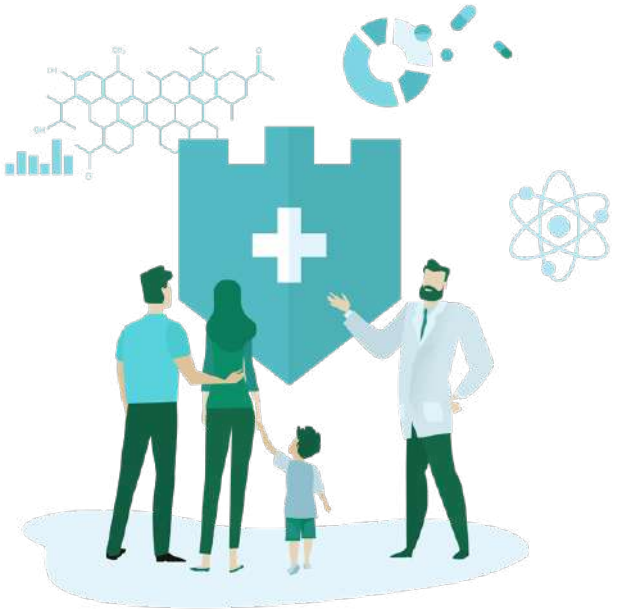
The Hospital's labor union was officially registered on April 24, 2024. However, a collective agreement has not yet been signed in accordance with the Collective Agreement Act. Relevant issues are discussed through negotiation meetings, which are governed by established operational guidelines. In 2024, a total of three negotiation meetings were held. In addition, labor issues may also be communicated and discussed through labor-management meetings initiated by labor representatives. The Hospital also provides various channels such as the Cheng Kung Window, the Employee Communication Platform, and other employee complaint mechanisms to ensure employees' voices are fully heard.

Multiple Accessible Whistleblowing Channels

The Hospital has established multiple channels for feedback, including the "Superintendent's Mailbox," the "Cheng Kung Window Employee Feedback Platform," and the "Employee Communication Platform" in the personnel system. These channels handle feedback from both external customers and internal staff.

Employee Misconduct Complaint Channels	
Receiving Unit	Occupational Safety and Health Office
Service Address	National Cheng Kung University Hospital, No. 138, Shengli Road, North District, Tainan City
Complaint Method	Telephone：(06)2353535 #3811
	Email： em72214@ncku.edu.tw

External Stakeholder Misconduct Complaint Channels	
Receiving Unit	Secretariat (also responsible for civil service ethics)
Service Address	National Cheng Kung University Medical School Hospital, No. 138, Shengli Road, North District, Tainan City
Complaint Method	Telephone：(06)2353535 #6632
	Email：n045502@mail.hosp.ncku.edu.tw



1.3 Risk Management

Medical School Peers

Building Sustainability Together: Partnership Between the Hospital and the University NCKU Hospital continues to promote sustainable operational management in line with National Cheng Kung University's five major SDSP objectives, aiming to build a green, mutually beneficial, and thriving ecological value chain.

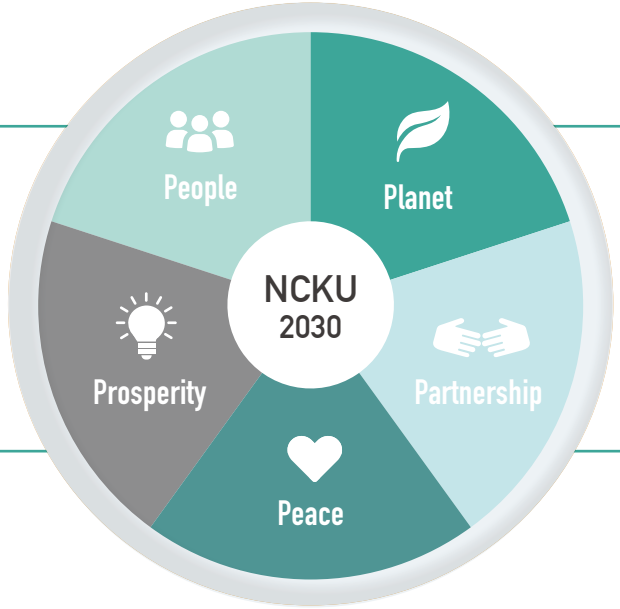
SDSP Medical School Peers SDSP

Putting people first and fostering well-being

National Cheng Kung University not only nurtures future talent but also emphasizes the values necessary for sustainable development. In response to evolving societal and environmental changes, the University extends its medical and health resources to address issues such as aging populations and environmentally induced diseases.

Innovation and Breakthrough Accelerate Growth

For years, NCKU has advanced Taiwan's frontier technologies through its robust research and development resources, cultivating innovative leaders across various sectors and fostering globally influential enterprises and individuals. This enables everyone to find their place and become active participants in shaping an ideal future.



Respecting Diversity and Promoting Peace

In recent years, NCKU has demonstrated strong capabilities in domestic interdisciplinary cooperation, international partnerships, Southeast Asia engagement, and emergency response, reflecting its potential and commitment to promoting regional peace.

Inclusive Design for a Sustainable Environment

Situated in the heart of Tainan, NCKU embraces the city through its open campus, a unique feature among Taiwan's universities. By integrating into local daily life, the campus symbolizes shared resources and collaborative development with the local environment.

Cross-domain integration and prosperity

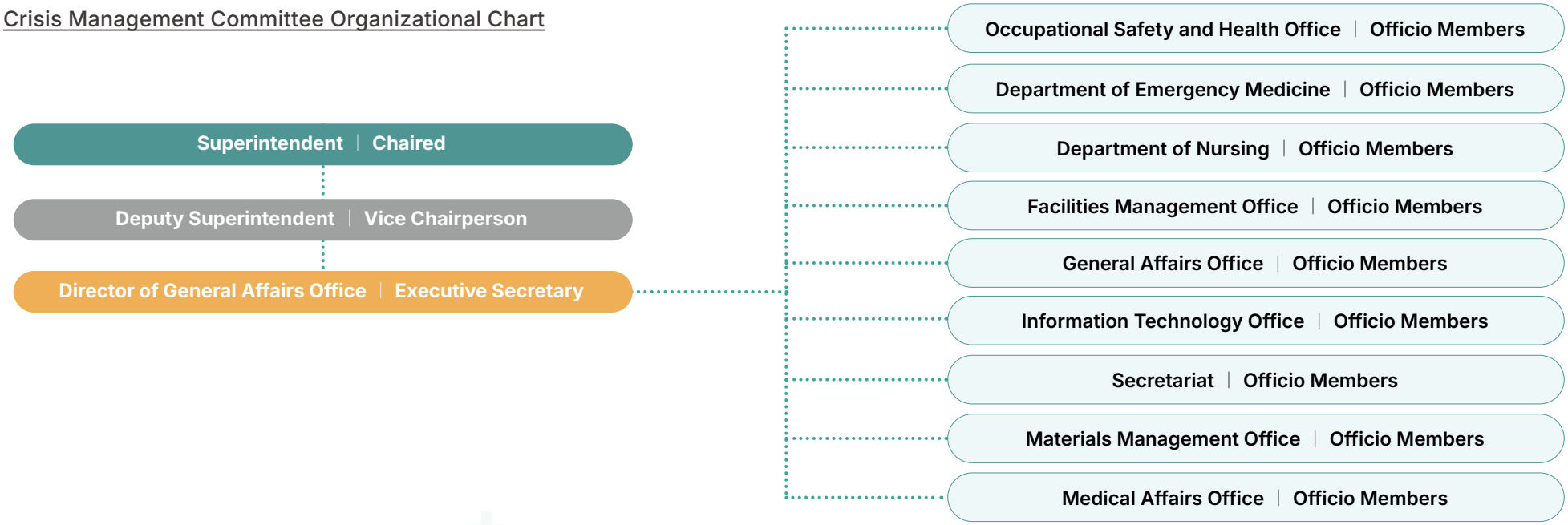
With a vision to become Asia's talent pool for sustainable development, NCKU actively expands international alliances, bilateral and multilateral conferences, and cross-border cooperative agreements. These efforts align with SDG 17：Partnerships for the Goals, emphasizing that only through cross-sector collaboration can the 2030 Agenda be effectively implemented.

Crisis Management Committee

In response to the high-risk and high-responsibility nature of its national-level healthcare mission, the Hospital has established a comprehensive risk management system and formed the “Crisis Management Committee” to oversee crisis response and safety management. This committee enhances the Hospital’s organizational risk control capabilities through hazard identification, tiered response planning, and cross-departmental coordination, ensuring swift and effective handling of various challenges while maintaining the quality of medical services and public health safety.

The Committee is chaired by the Superintendent, with a Deputy Superintendent appointed as the vice chairperson. Members include heads of departments such as the Occupational Safety and Health Office, Department of Emergency Medicine, Nursing Department, Maintenance Department, General Affairs Office, Information Technology Office, Secretariat, Material Supply Department, and Medical Affairs Office, who serve as ex officio members. The Director of the General Affairs Office serves as the Executive Secretary, and other members are appointed by the Hospital Director from relevant units, totaling 19 to 21 members. Each term lasts two years, with regular meetings held quarterly and ad hoc meetings convened as necessary. All related plans are submitted to the competent authority for reference to ensure timeliness and effectiveness in emergency response and disaster management.

Crisis Management Committee Organizational Chart

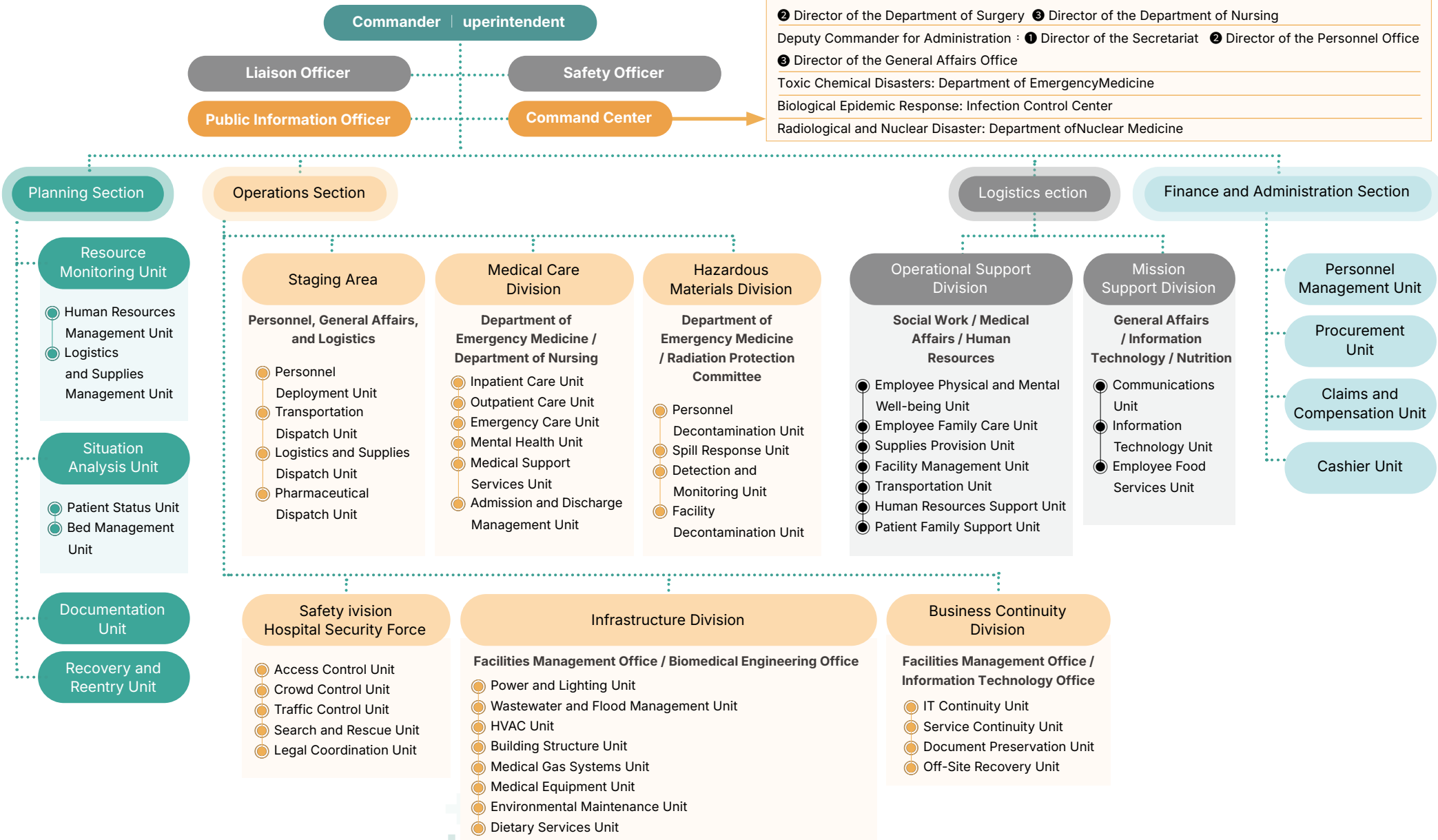


Crisis Management Committee – Primary Responsibilities	
Prevention	ormulate crisis management policies and promotion guidelines
Preparedness	Review plans for environmental, facility, and personnel safety management and crisis response
Response	Evaluate emergency response procedures and post-disaster improvement reviews
Recovery	Supervise crisis management-related training activities

The Hospital's disaster response system includes designated liaison officers, safety officers, and public information officers to assist with communication and information dissemination. The overall response system is structured into five main sections: Command Center, Planning Section, Operations Section, Logistics Section, and Finance/Administration Section, forming a clear vertical and horizontal communication mechanism.

The Command Center comprises a Deputy Commander and several functional commanders (e.g., medical, support, logistics) responsible for coordinating resources and operations across all sections. The Planning Section oversees resource integration and pre-disaster planning, covering manpower, material dispatch, bed management, and recovery planning to ensure the feasibility and continuity of the response. The Operations Section is responsible for frontline medical services and on-site responses, including clinical care, emergency treatment, security, traffic control, environmental inspection, and alternate site management—making it the primary executor of disaster response tasks. The Logistics Section provides comprehensive support services, such as social work, manpower assistance, material transportation, facility management, and daily necessities (e.g., catering, cleaning), to ensure the basic needs of personnel and patients are met during emergencies. The Finance/Administration Section handles human resources, procurement, accounting, and damage compensation matters, offering stable financial and administrative backing to enhance the sustainability of the entire response system.

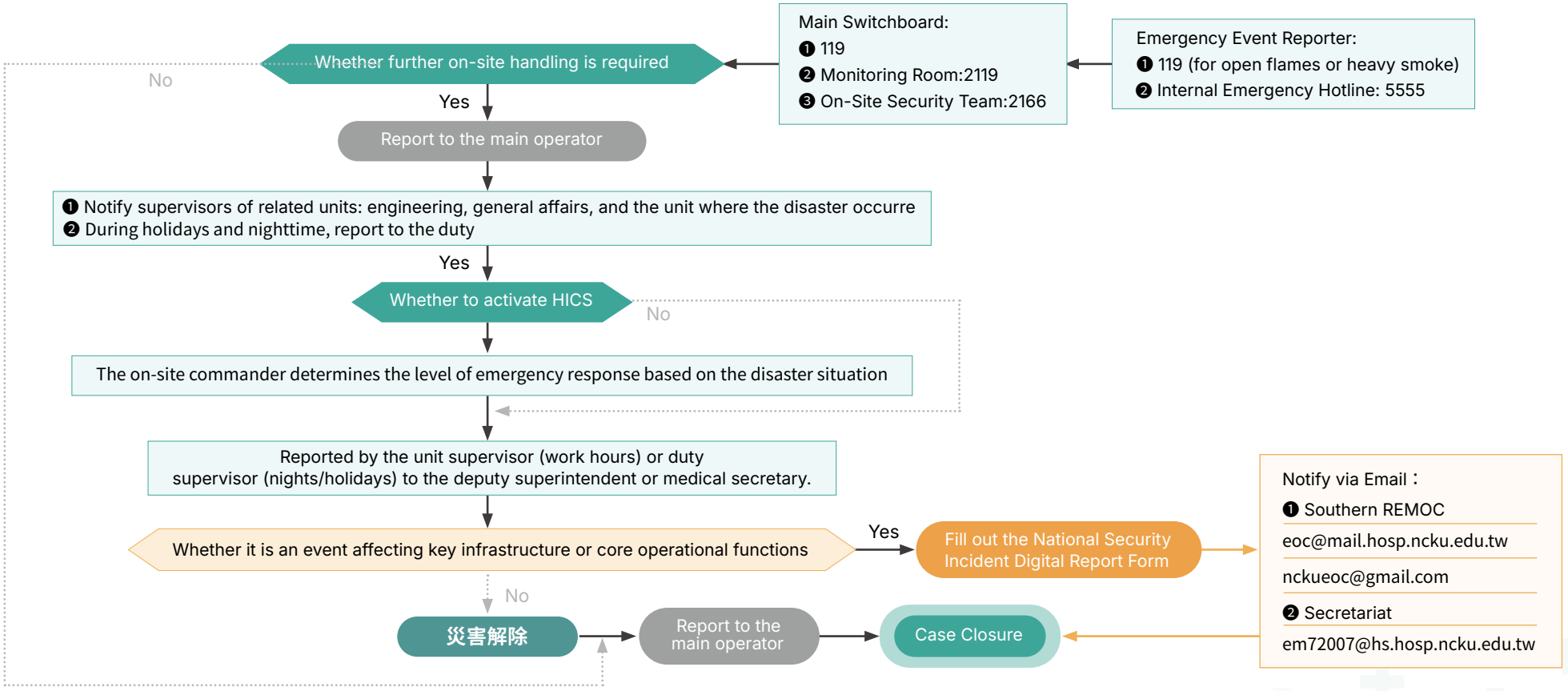
Organizational Chart of the Hospital Emergency Response Command System



In the event of a disaster, support will be requested according to the "Emergency Disaster Response Notification Flowchart," with a three-tier mobilization mechanism established based on the severity of the disaster to ensure the timely and effective deployment of human resources. In addition, all personnel shall carry out their assigned duties in accordance with the "Hospital Incident Command System (HICS)," forming a well-organized and orderly command chain. If the disaster results in damage to the hospital building or an influx of mass casualties from the community causes a shortage of medical resources, patients will be relocated based on the "Patient Reassignment Response Principles," with priority given to transferring them to other appropriate sites or partner medical institutions to ensure the continuity of medical care and patient safety. At the same time, if another hospital requires evacuation support due to a disaster, the Hospital will also receive patients according to the "Patient Admission Principles," continuing their original medical care plans and providing prompt, seamless medical support, demonstrating the Hospital's comprehensive response capacity and commitment as a regional emergency responsibility hospital.

Approved by the 18th Crisis Management Committee on 2021/01/25
Approved by the 29th Crisis Management Committee on 2023/12/26
Approved by the 34th Crisis Management Committee on 2025/03/25

Emergency Disaster Response Notification Flowchart



NCKU Hospital has established a comprehensive system for notification, evacuation, patient reassignment, and hospital isolation operations. Standard operating procedures have been developed for different types of disasters, complemented by regular tabletop drills and hospital-wide compound live exercises. Through post-disaster reviews and knowledge management feedback mechanisms, the Hospital continuously enhances its overall organizational resilience and post-disaster recovery capacity, ensuring uninterrupted medical services and patient care even during major disasters.

In response to increasingly diverse and unpredictable disaster scenarios, the Hospital promotes five core annual training programs categorized by disaster type, including information and personal data security, medical general knowledge, infection control, emergency disaster response, and first aid training. These programs cover areas such as cybersecurity, medical dispute prevention, cluster infection response, fire and earthquake drills, and mass casualty incident response. Quarterly drill themes are planned for high-risk periods to reinforce practical experience and frontline team proficiency.

Disaster Education and Training Courses

Disaster Type Classification	Course	Content
Information and Personal Data Security	Information Security, System Failure	◉ Information Security Advocacy and Emergency Response Drill Training ◉ Personal Data Audit Training ◉ Information Security under Epidemic Prevention
Medical General Knowledge	Medical Dispute Incidents	◉ Identification of Medical Risks and Dispute Prevention Actions: “Do Three Things Right to Avoid Medical Disputes”
Infection Control	Cluster Infections	◉ Introduction to Emerging Infectious Diseases ◉ Cluster Infection Response ◉ Personal Protective Equipment Donning and Doffing Drills
Emergency Disaster Response	Fire, Earthquake, Hazardous Materials, Violence Threats	◉ Disaster Education ◉ Evacuation Concepts ◉ Fire Prevention Training ◉ Biosafety and Violence Prevention Techniques
First Aid Training	Mass Casualty Incidents	◉ Golden Hour First Aid Techniques ◉ First Aid Procedure Drills ◉ First Aid Theoretical Knowledge

Image / Hands-On Donning and Doffing Training

Image / Awareness Campaigns

Image / On-the-Job Education

Image / On-the-Job Education

Conflict of Interest

To systematically identify potential threats and vulnerable areas, the Hospital has implemented the "Hazard and Vulnerability Analysis (HVA)" as a risk identification tool. Each sub-project's responsible unit forms a dedicated assessment team based on the Hospital's historical disaster experience, external environmental changes, and emerging risks—such as natural disasters and technological hazards. The team regularly inventories risk events that could disrupt medical services or threaten public safety, quantifies their likelihood and impact, and evaluates their risk values through vulnerability analysis. Risk events with a score exceeding 25% are classified as high-risk and incorporated into the Hospital's annual crisis management priorities for ongoing monitoring. Through cross-departmental collaboration, the Hospital enhances disaster response effectiveness and the resilience of the healthcare system.

According to the Hospital's risk assessment, the top five potential risk events are fire, mass casualty incidents, violent incidents, emerging infectious diseases, and typhoons. These events pose significant threats to patient safety and hospital operations due to their high likelihood and severe impact, and are therefore prioritized for prevention and response.

To strengthen overall emergency preparedness, the Hospital has developed specific sub-plans for each high-risk event, covering preventive measures, response procedures, command systems, manpower allocation, and post-disaster recovery mechanisms. These plans are continually refined through regular drills and training. In addition, the Hospital is actively enhancing its early warning systems, resource integration, and interdepartmental coordination to ensure uninterrupted medical services and patient safety during unexpected events.

2024 Risk Items and Assessment Analysis Results

Hazardous event	Likelihood	Severity = Level of impact & disaster prevention						
		Human Life Hazard	Property Loss	Operational Loss	Level of Preparedness	Internal Response	External Response	Risk
	Chance of the hazard happening	Possibility of death or injury	Damage or loss of hardware	Service interruption	Preparation in advance	Time, efficiency, and resources	Community support and resource sharing	Relative threat percentage
Score	0 = Not Applicable | 1 = Low | 2 = Medium | 3 = High				0 = Not Applicable | 1 = High | 2 = Medium | 3 = Low or None			0-100%
Fire	2	1	3	2	1	1	1	33%
Mass Casualty Incident	2	2	0	1	2	2	1	30%
Violent Incident	3	1	1	0	1	1	1	28%
Emerging Infectious Disease	2	2	1	1	1	1	1	26%
Typhoon	2	1	1	2	1	1	1	26%
Torrential Rain	2	1	1	2	1	1	0	22%
Earthquake	2	1	2	1	1	1	0	22%
War	1	3	2	2	2	2	1	22%
Medical Dispute Incident	2	1	0	1	1	1	1	19%
Information System Failure	2	0	1	1	1	1	1	19%

Note: Risk Value Formula = (Likelihood ÷ 3) × ((Impact Severity + Property Damage + Operational Loss + Preparedness Level + Internal Response + External Response) ÷ 18)

2024 Risk Items and Assessment Analysis Results

Hazardous event	Likelihood	Severity = Level of impact & disaster prevention						
		Human Life Hazard	Property Loss	Operational Loss	Level of Preparedness	Internal Response	External Response	Risk
	Chance of the hazard happening	Possibility of death or injury	Damage or loss of hardware	Service interruption	Preparation in advance	Time, efficiency, and resources	Community support and resource sharing	Relative threat percentage
Score	0 = Not Applicable | 1 = Low | 2 = Medium | 3 = High				0 = Not Applicable | 1 = High | 2 = Medium | 3 = Low or None			0-100%
Bomb Threat	1	1	1	1	1	1	1	11%
Medical Protest Incident	1	0	0	0	2	2	2	11%
Drought	1	0	1	1	1	1	1	9%
Power System Failure	1	1	1	1	1	1	0	9%
Elevator System Failure	1	1	1	1	1	1	0	9%
Radiation Leak	1	1	1	1	1	1	0	9%
Manpower Shortage	1	0	0	1	1	1	1	7%
Toxic Chemical Spill	1	0	0	0	2	1	1	7%
Financial Crisis	1	0	0	0	1	1	0	4%

Note: Risk Value Formula = (Likelihood ÷ 3) × ((Impact Severity + Property Damage + Operational Loss + Preparedness Level + Internal Response + External Response) ÷ 18)

Top Five High-Risk Events Identified in the Hospital's Risk Assessment	
1 Fire(33%)	Presents a high risk of operational disruption and potential property damage. Due to the rapid spread of fire, it poses a serious threat to medical facilities and personnel safety. As fire response requires cross-departmental collaboration and presents significant prevention challenges, it is the Hospital's top-priority hazard.
2 Mass Casualty Incident(29%)	the financial loss risk is relatively low, such events can immediately overwhelm emergency and inpatient capacity, severely impacting life safety and resource allocation. Meticulous activation, triage mechanisms, and internal/external communication networks are essential.
3 Violence Incident(28%)	Significantly affects the stability of the medical environment, especially posing high personal risk to frontline healthcare staff. Establishing comprehensive surveillance, reporting, and response mechanisms helps reduce incident frequency and ensure prompt handling of emergencies.
4 Emerging Infectious Diseases(26%	Highly transmissible, these can trigger hospital-wide outbreaks and community transmission, posing severe challenges to medical resources, infection control, and public health responses. It is essential to continuously strengthen quarantine, isolation, personal protection, and cross-departmental collaboration capacity.
5 Typhoon(26%)	having a forecast period, typhoons may damage infrastructure, power, communication, and transportation systems, resulting in medical service interruptions and hindering patient access. Emphasis should be placed on facility disaster resilience, backup power systems, and material stockpiling readiness.

Major Infectious Disease Emergency Response Plan

The Hospital is responsible for receiving referrals and providing treatment for emergency, critical, complex, and rare diseases in the Yunlin–Chiayi–Tainan region, and also serves as a supporting hospital in the Infectious Disease Control Medical Network. To prevent cluster infections from severely impacting patient safety, healthcare workforce, and operational continuity, NCKU Hospital has established the "Major Infectious Disease Cluster Event Crisis Management and Emergency Response Plan" based on risk management principles. This plan clearly outlines reporting procedures, isolation measures, manpower mobilization, and recovery strategies. It serves as a disease prevention management guideline to be followed by all hospital staff, patients, and visitors to reduce the risk of cross-infection, ensure stable hospital operations, and maintain uninterrupted healthcare services for the community.

Major Infectious Disease Cluster Incident Crisis Management and Emergency Disaster Response Plan

Prevention and Preparedness Phase

(1) Activation of Detection Mechanism

- Activation of the fever reporting system to monitor the health conditions of employees, visitors, and outsourced personnel
- Review of patients' travel history, contact history, and occupational epidemiological data
- Receipt of abnormal laboratory specimen results and activation of the reporting mechanism

(2) Education and Drills

- Regular internal training on cluster infections
- At least one annual cluster infection drill (tabletop or physical)
- Tiered training for different categories of personnel

(3) Employee Vaccination

- Health checkups and vaccinations conducted in accordance with the health management plan.

(4) Establishment of Response Organization

- Formation of a response command team (medical, quarantine, resources, administration, document management, etc.)

Incident Response Handling

(1) Reporting and Activation Procedures

- Unit supervisors and infection control personnel form an investigation team to confirm the case definition and epidemiological correlation
- Convene a response team meeting to establish preliminary resolutions
- If reporting criteria are met, notify the competent health authority

(2) Implementation of Response Procedures

- Subsequent actions are determined based on whether it is a hospital-acquired cluster infection event
- If a common source of infection is confirmed, conduct specimen collection, contact tracing, and strengthen infection control measures

Management of Patients and Personnel Principles

(1) Patient Management

- Suspend admission of new patients until the outbreak is under control
- In principle, patients in the original unit should not be transferred; if transfer is necessary, follow infection control-recommended routes
- Implement cohort care or appropriate isolation measures; asymptomatic individuals are to be treated as potential infection risks
- If the outbreak is unresolved, evacuate the ward and reopen only after thorough disinfection

(2) Healthcare Personnel Management

- Establish a daily temperature and symptom monitoring system
- Restrict cross-unit support and minimize the number of personnel entering the unit
- Wear standard or tiered personal protective equipment (PPE), based on the pathogen risk level.

Ward Evacuation and Relocation Operations

Activation shall proceed in three phases based on the number of infected inpatients：

(1) Phase One (≤6 inpatient cases)

- Evacuate beds 17–22 in Ward 12A
- Provide 1:1 care for critical patients and initiate nursing and physician manpower reallocation

(2) Phase Two (>6 inpatient cases)

- Expand evacuation to include Rooms 01–16 and Room 27
- Reassign staff from intensive care and internal medicine units for support

(3) Phase Three (>21 beds)

- Activate Ward 11A to admit febrile patients without respiratory symptoms
- Evacuate the original ward and continue manpower redistribution

Follow-up Measures After a Cluster Event

(1) Recovery Plan

- Identify stakeholders and incident locations, and provide psychological counseling
- Conduct disaster and after-effect assessments to monitor the development of the situation

(2) Review and Improvement

- Prepare an incident investigation and response report
- Review deficiencies, and update infection control policies and training materials

1.4 Operational Performance

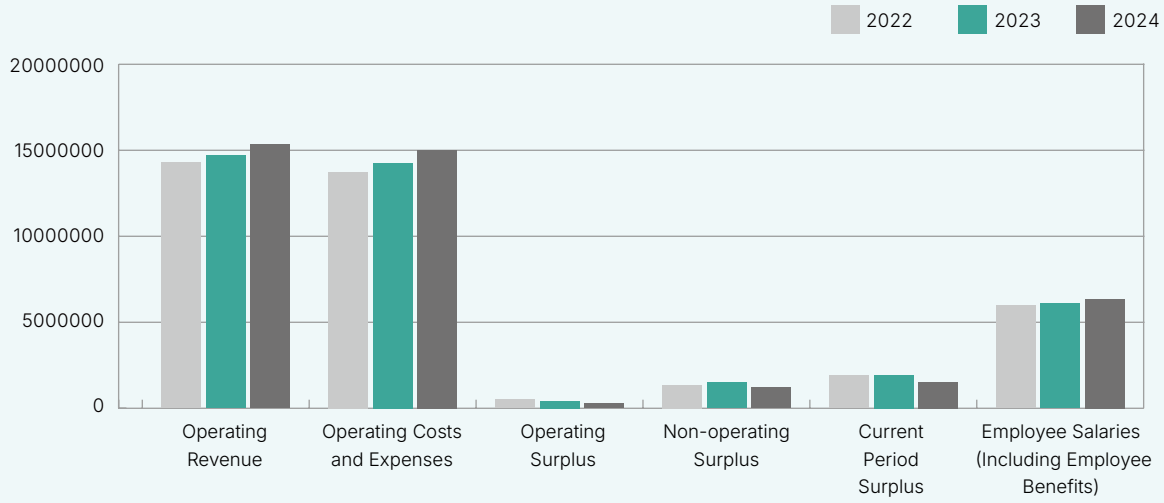
Economic Performance

To gain a comprehensive understanding of the hospital's recent financial operations and management effectiveness, the key performance indicators for the past three years have been compiled. By conducting a longitudinal comparison of these data, not only can the stability and profitability of the hospital's core operations be assessed, but the results also serve as a crucial reference for future operational strategy planning and resource allocation.

Amidst a globally challenging economic environment, National Cheng Kung University Hospital's overall operating revenue in 2024 increased by approximately 4.2% compared to 2023, reflecting the continued growth in the hospital's core business volume. However, operating costs also rose accordingly, with a year-on-year increase of approximately 5.3% from 2023 to 2024. This was mainly due to adjustments in the minimum wage and inflation, which led to increased costs in medications, medical supplies, consumables, and outsourcing fees. Additionally, personnel costs increased in alignment with government salary adjustment policies. As a result, the surplus in 2024 was lower than in 2023.

Operational Performance Over the Past Three Years

Item / Year	2022	2023	2024
Operating Revenue	14,306,507	14,718,330	15,341,357
Operating Costs and Expenses	13,752,431	14,260,552	15,022,988
Operating Surplus	554,076	457,778	318,369
Non-operating Surplus	1,397,052	1,533,599	1,257,827
Current Period Surplus	1,951,128	1,991,377	1,576,196
Employee Salaries (Including Employee Benefits)	5,997,506	6,116,321	6,397,410
Payments to the Government	20,940	19,780	19,637



Subsidies Received from the Government

Subsidizing Agency	Subsidy Amount (NTD thousand)
Ministry of Education	249,542
Ministry of Health and Welfare	17,800

Recent Major Infrastructure (Projects)

In response to the advent of a super-aged society, the rapid development of smart medical technologies, and the urgent need for regional medical resource integration, NCKU Hospital has, in recent years, actively planned and promoted several major projects with forward-looking and strategic significance. By integrating clinical services, academic research, and industrial innovation resources, these efforts have not only significantly enhanced the quality and accessibility of medical services but have also deepened the Hospital's influence in the fields of education, research, and medical industry translation. This series of developments demonstrates NCKU Hospital's leadership in smart healthcare, elderly care, and the reinforcement of regional health systems, exerting a profound and positive influence on the development of healthcare in southern Taiwan and the nation as a whole.

Major Infrastructure Projects of NCKU Hospital in Recent Years

Project	Description
Geriatric Hospital of National Cheng Kung University Hospital and Center for Geriatric Medicine and Smart Healthcare Education Development	◉ The first dedicated hospital in Taiwan designed specifically for the elderly population ◉ Introduction of smart healthcare technologies ◉ Promotion of a "wall-less" integrated community care model ◉ Scheduled for completion by the end of 2026
NCKU Shalun Hospital	◉ A smart green building integrating urban and green space symbiosis ◉ Acts as the Pediatric Medical Center of Southern Taiwan ◉ Includes a subterranean emergency shelter for casualties and disaster response facilities ◉ Implements a regional care model that combines cloud-based referrals and telemedicine

Major Infrastructure Projects of NCKU Hospital in Recent Years

Project	Description
National Southern Cancer Center	◉ Features multidisciplinary integrated cancer care ◉ Currently houses 13 major cancer teams ◉ Provides high-quality, high-standard, diversified cross-disciplinary and integrated comprehensive cancer treatment
Clinical Innovation and R&D Center	◉ Establishes a sustainable smart medical R&D chain by connecting resources across industry, government, academia, medical, and research sectors. ◉ Uses smart healthcare assistance systems to enhance the efficiency and accuracy of medical decision-making, introduces human factors engineering to improve workflows and optimize the healthcare environment and processes ◉ Designs innovations based on clinical needs, establishing the "CARD Medical Record Integration Platform" to consolidate over 14 years of electronic medical records, supporting AI training and precision medicine applications ◉ Aligns with national policies and international resources, builds a platform for global exchange, and organizes "Igniting Clinical Innovation" lecture series, workshops, and hackathons to encourage internal and external faculty and students to engage in hands-on innovation, promoting a culture and education of innovation
Joint Reconstruction Center	◉ Provides integrated services from newborn screening to elderly wellness, preventive care, and treatment ◉ Based on artificial hip and knee replacement surgeries, incorporates computer navigation and minimally invasive surgery, proven to reduce surgical trauma ◉ Expands services to screening, outpatient treatment, and integrated care for related diseases; develops joint preservation techniques, including early screening for developmental dysplasia of the hip (DDH), non-surgical treatment for degenerative arthritis, joint injections, arthroscopic debridement, cartilage grafting, and various osteotomy procedures ◉ Offers diversified treatment options including medication, hyaluronic acid injections, arthroscopic plica excision, platelet-rich plasma (PRP) injections, cartilage transplantation, and osteotomy ◉ Promotes cross-disciplinary integration for post-operative function design and follow-up ◉ Develops innovative techniques and publishes results in academic journals ◉ In 2023, obtained quality certification from the Joint Commission of Taiwan for "Developmental Dysplasia of the Hip (DDH) Pediatric Care Services"

2

Chapter

LEADING QUALITY, ADVANCING PATIENT-CENTERED CARE

2 Leading Quality, Advancing Patient-Centered Care

2.1 Medical Quality Services

Material Topic	Medical Quality and Safety Management
Importance	◉ Medical quality and patient safety are the core values of healthcare services and the cornerstone of the Hospital's sustainable development. They directly impact all major stakeholders and are closely related to the Hospital's reputation, financial status, talent, and regulatory compliance.
Influence and Impact	Positive / Actual / Governance: Enhances decision-making quality and promotes cross-departmental collaboration. Positive/Actual/Social: Improves medical outcomes, reduces adverse medical events, and increases patient satisfaction. Positive/Actual/Social: Standardizes processes, enhances care rights, and strengthens public trust. Negative/Potential/Governance: Overregulation and lack of flexibility.
Policies	◉ Establish the "Medical Quality and Patient Safety Committee" as the highest decision-making body for healthcare quality and patient safety affairs. ◉ Establish the "Incident Reporting Guidelines" and the "Patient Safety Reporting SOP" to encourage all staff to proactively report medical incidents. ◉ Follow the "Quality Indicator Management Guidelines" and the "Quality Indicator SOP" to regularly monitor, analyze, and review various medical quality indicators. ◉ Follow the "Quality Promotion and Incentive Guidelines" to encourage all employees to actively participate in quality improvement activities.
Strategies	◉ Establish a comprehensive patient safety reporting system: Encourage healthcare personnel to report medical incidents early to detect potential risks. ◉ Execute medical quality monitoring and evaluation: Regularly collect and analyze medical data to evaluate and improve quality. ◉ Promote a culture of patient safety：Foster an open and transparent environment and encourage collaboration between staff and patients in safety initiatives. ◉ Utilize technology to enhance medical quality: Implement medical information systems and smart devices to improve efficiency and accuracy. ◉ Organize quality achievement competitions and provide team coaching for quality improvement. ◉ Conduct relevant training programs to enhance staff awareness of medical quality and patient safety.

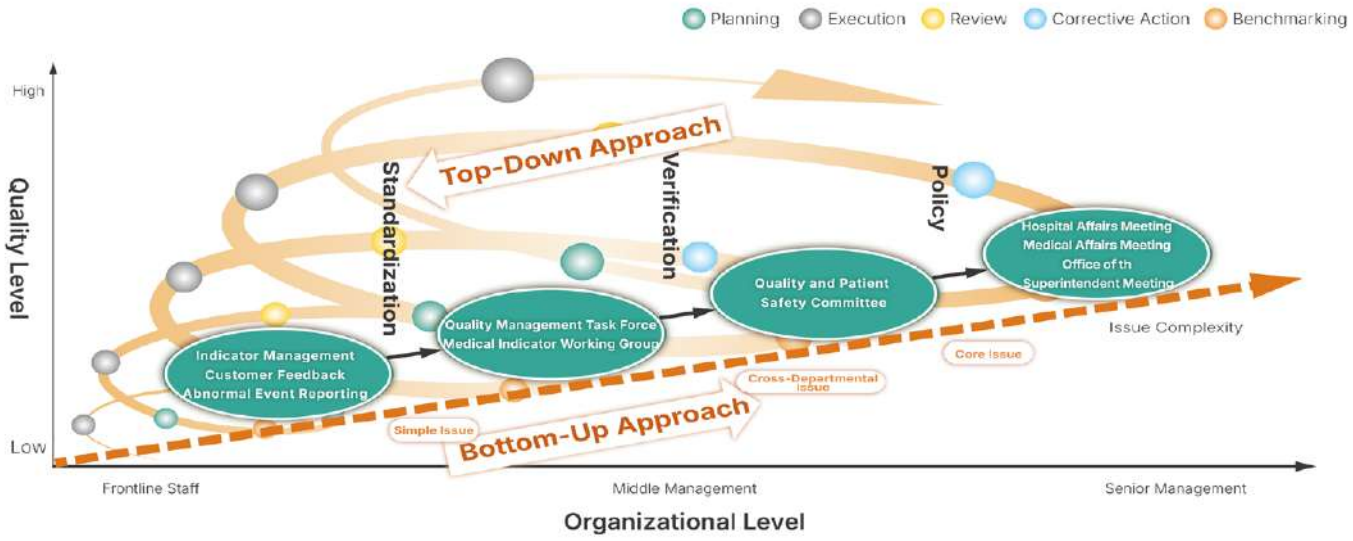
Material Topic	Medical Quality and Safety Management
Goals & Objectives	**Short-Term Goals (2025–2026)** ◉ Conduct clinical audits of high-risk processes. ◉ Establish a digital patient transportation process. ◉ Optimize the execution flow, tools, and user interface of SDM (Shared Decision Making). ◉ Introduce a BI system to visualize clinical indicator management. **Mid-Term Goals (2027-2030)** ◉ Strengthen Team Resource Management (TRM)training to improve communication and collaboration within medical teams. ◉ Continue developing mid- to senior-level leadership in medical quality and patient safety. ◉ Enhance the use of ICT to ensure patient information security. **Long-Term Goals (Post-2030)** ◉ Build a hospital smart safety monitoring system for real-time patient safety surveillance. ◉ Cultivate professionals in medical quality and patient safety and establish an internal talent pool.
Management Evaluation Mechanism	◉ The Medical Quality and Patient Safety Committee convenes quarterly to review policy implementation and make improvements. ◉ Monthly indicator task force meetings monitor abnormal indicators and implement timely interventions. ◉ Annual quality improvement activities are conducted to strengthen problem-solving abilities. ◉ Outstanding teams are nominated for external competitions to showcase their improvement results. ◉ Patient experience surveys are used to collect feedback for service optimization.
Performance and Adjustment	◉ In 2024, the Hospital received the NHQA Thematic Gold Award and Creative Award, 7 Merits, System Excellence Center Award, EBM Gold, Silver, Bronze, Excellence, and Merit Awards, Simulation Silver and Bronze Awards, Smart Healthcare Solution Bronze Award and Certification, and Outstanding Healthcare Gold Award.

2.1.1 Cultivating a Quality Culture

Comprehensive Quality Management System

The Hospital prioritizes "Total Quality Management" as the core of its quality culture. In 2004, the Hospital established a dedicated "Quality Management Center," and subsequently adjusted its organizational structure to integrate customer feedback management mechanisms. This ensures that quality management is no longer the responsibility of a single department but a shared goal throughout the Hospital. From the Superintendent's Office meetings and medical affairs conferences to grassroots quality control promotion teams, a system is formed where policies are set top-down and issues are reported bottom-up, ensuring continuous quality improvement and effective resolution of complex issues.

Hospital-Wide Quality Management Operational Model



Continuous Quality Improvement Momentum

"Continuous improvement" is another key feature of the Hospital's quality culture. Through diverse mechanisms, staff at all levels are encouraged to actively participate in quality enhancement. For example, regular Quality Control Circle (QCC) and quality improvement project competitions are held. In addition, by defining and monitoring quality indicators, promoting root cause analysis Root Cause Analysis (RCA), and conducting strategic cross-team review meetings, the Hospital systematically identifies problems, formulates action plans, and evaluates effectiveness to ensure steady improvement in quality.

Close Collaborative Teamwork

The Hospital not only coordinates and resolves complex issues through cross-team meetings but has also established the “Ward Director System,” enabling ward directors to serve as primary leaders in overseeing medical quality and patient safety within their wards and actively participate in hospital accreditation and disease-specific certification. Furthermore, the collaboration between quality management consultant physicians and quality center specialists, as well as experience sharing and guidance with external medical institutions, highlights NCKU Hospital’s emphasis on collective intelligence and team efforts in promoting quality management.

Comprehensive Reward and Recognition Mechanism

To encourage staff to actively participate in quality improvement, the Hospital has established a comprehensive “reward and recognition” mechanism. In addition to internal QCC and quality improvement project competitions with monetary awards, employees are also encouraged to participate in national and international quality-related competitions, for which generous rewards and performance evaluation bonuses are offered, along with public recognition. These positive incentives effectively enhance employees’ engagement and commitment to quality improvement, allowing the quality culture to take root and flourish within the Hospital.

The Hospital’s quality culture is not only reflected in its rigorous systems and processes but is also deeply embedded in the daily work of every healthcare professional. Through total quality management, continuous improvement, a strong focus on education and training, embracing innovative learning, close teamwork, and a robust reward mechanism, NCKU Hospital has successfully created a model of excellence in healthcare quality and patient safety.

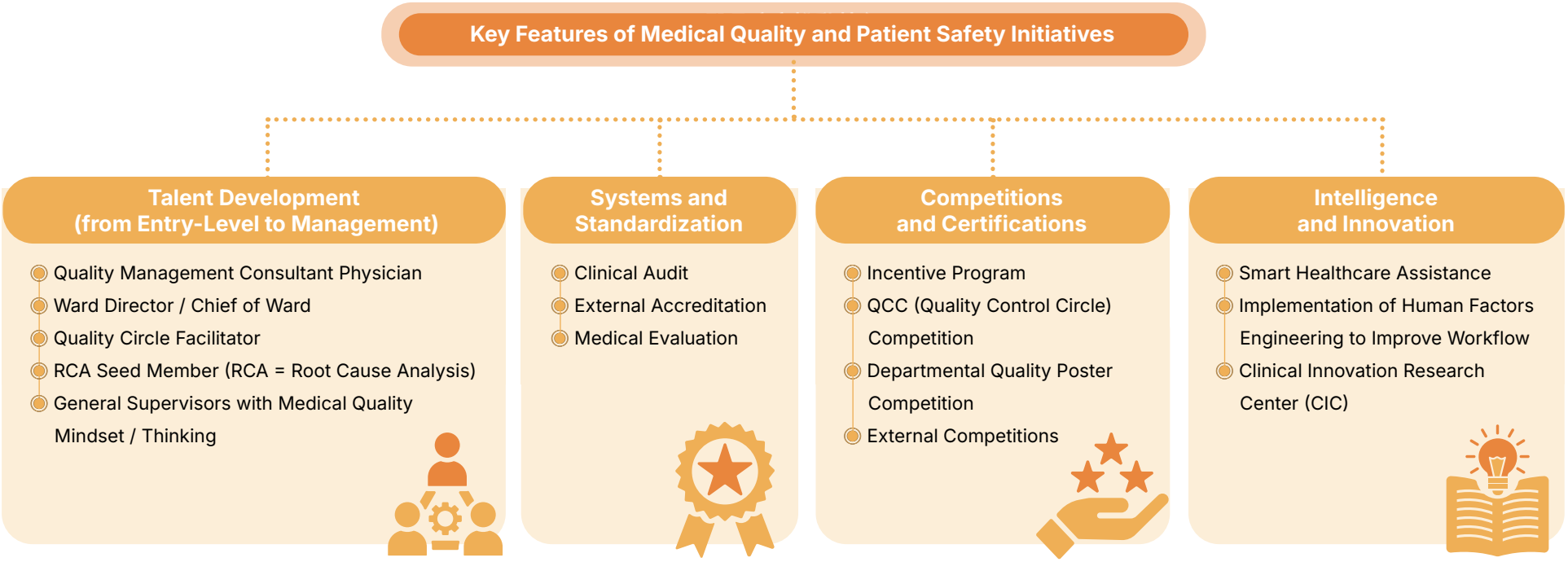
2.1.2 Distinctive Features in Promoting Healthcare Quality and Patient Safety

To continuously improve healthcare quality and ensure patient safety, the Hospital has implemented several distinctive initiatives. In terms of talent development, comprehensive training programs are designed for medical personnel at all levels—from frontline staff to management. These include cultivating the professional capabilities of quality consultant physicians, enhancing the quality management awareness of ward directors, training QCC facilitators in practical skills, developing RCA (Root Cause Analysis)seed instructors, and strengthening first-line supervisors’ emphasis on quality thinking. On the system and standardization front, the Hospital is committed to establishing well-defined and standardized operating procedures. Clinical audits are conducted to evaluate the implementation of medical practices. Active participation in external accreditations ensures alignment with international standards, while hospital evaluations drive continuous enhancement of medical service quality.

Internal momentum for continuous improvement is further fueled through competitions and certification programs. Incentive plans recognize outstanding quality improvement initiatives. QCC competitions foster teamwork and problem-solving abilities, departmental quality poster competitions encourage sharing of improvement outcomes, and external contests promote exchange and learning with other healthcare institutions.

Lastly, in response to trends in intelligence and innovation, the Hospital actively incorporates related applications—such as using smart healthcare support systems to enhance the efficiency and accuracy of clinical decision-making, introducing human factors engineering to optimize workflows and the medical environment, and establishing the Clinical Innovation and Research Center (CIC) to encourage healthcare personnel to generate and implement innovative solutions in healthcare quality and patient safety.

Key Features in Medication and Patient Safety Promotion



2.1.3 Healthcare Quality and Patient Safety Management Framework

The Hospital has established a comprehensive healthcare quality and patient safety management system encompassing 37 hospital-level committees, dedicated to ensuring excellence in healthcare quality and patient safety.

The hospital-level "Healthcare Quality and Patient Safety Committee" is the core unit responsible for formulating hospital-wide policies and directions related to healthcare quality and patient safety. The Superintendent serves as the convener and appoints a deputy convener, while the Director of the Quality Management Center acts as the executive secretary. The committee gathers input from a broad spectrum of professionals, comprising 44 members, including ex officio members such as first-line supervisors from each clinical department, the Department of Pharmacy, Department of Nursing, Department of Nutrition, Secretariat, Quality Management Center, Office of Medical Affairs, and Information Office. The remaining members are nominated by relevant departments and appointed by the Superintendent. The term of committee members is one year, and the list of members is updated every August.

The responsibilities of the "Healthcare Quality and Patient Safety Committee" include: formulating policies and directions for healthcare quality and patient safety; establishing an internal non-punitive incident reporting mechanism and risk management system; collecting and analyzing reports on healthcare quality and adverse events, and developing improvement plans; reviewing issues related to healthcare quality and patient safety management raised by various units and proposing improvement strategies; formulating implementation plans for healthcare quality and patient safety training; and reviewing the annual goals and strategic work plans for promoting healthcare quality and patient safety across the Hospital.

To ensure our Hospital's medical quality and patient safety policies align with public needs, NCKUH invites external experts in quality improvement and patient safety to join the Medical Quality and Patient Safety Committee. In 2024, seven such experts served as Social Representatives, advocating for patient rights and offering valuable recommendations, thereby strengthening NCKUH's initiatives in medical quality and patient safety.

Under the Medical Quality and Patient Safety Committee there are two key sub groups:

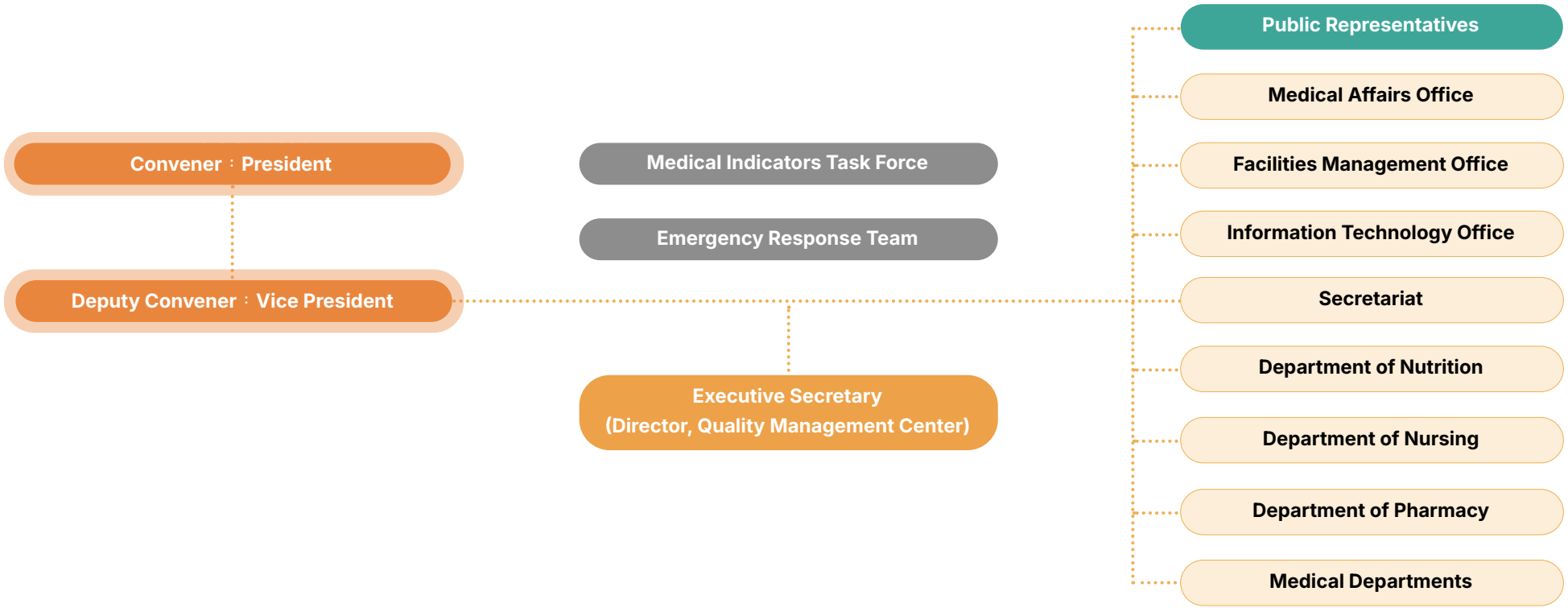
Clinical Indicators Working Group

Establishes an effective monitoring and evaluation mechanism for medical quality and patient safety indicators; guides each clinical department in applying these indicators; and reports and reviews progress quarterly at the Medical Quality and Patient Safety Committee.

Emergency Response Task Force

Oversees the Hospital's emergency drills and quality audits by regularly inspecting emergency vehicles' medications and equipment, conducting in depth reviews of every emergency response to identify deficiencies and implement corrective actions, and presenting annual findings and improvement plans to the Medical Quality and Patient Safety Committee.

Organizational Structure of the Medical Quality and Patient Safety Committee



The Hospital's strategic objectives for quality are "Deliver High Quality Care," "Enhance Internal and External Customer Satisfaction," and "Create a Safe Care Environment." To centralize quality management, the Quality Management Center was established in January 1994, renamed the Quality Center in September 2015, and in September 2018 integrated the Public Affairs Office's complaint handling to strengthen customer feedback management. The Quality Center comprises a Director, two Deputy Directors, dedicated and administrative staff, and clinical advisors appointed from senior attending physicians; Unit Chiefs are also assigned to facilitate cross team collaboration. The Center is organized into five dedicated units:

Organizational Structure of the Medical Quality and Patient Safety Committee

Patient Safety Unit

Develops preventive measures for adverse events, establishes early warning and reporting mechanisms, and safeguards patient safety.

Medical Quality Unit

Defines quality and safety indicators, monitors and evaluates care quality, conducts reviews and analyses, and implements improvements.

Customer Relations Unit

Handles patient and family feedback, complaints, and appeals; tracks and implements corrective actions; ensures high quality service.

Education & Training Unit

Conducts quality management training, coaches Quality Circles and improvement projects, and promotes knowledge exchange and external certification.

Accreditation & Certification Unit

Manages hospital accreditation, disease specific care certifications, and authorization for high risk procedures to ensure compliance with quality standards.

2.1.4 Fostering a Patient Safety Culture

Patient Safety Culture Survey

To promote a culture of patient safety, the Hospital conducts the “Patient Safety Culture Survey (PSC)” annually to proactively detect potential safety risks and serve as a forward-looking indicator for assessing and enhancing patient safety outcomes.

To cultivate a strong patient safety culture, departments are encouraged to actively implement internal improvement plans, including building teams that prioritize patient safety, establishing mechanisms that reward reporting and demonstrate tangible improvements, enhancing organizational safety climate through Team Resource Management (TRM) to foster effective interprofessional collaboration, strengthening staff well-being and workplace resilience, and enhancing the ability of healthcare personnel and the organization to respond to challenges.

Departments with outstanding performance in promoting patient safety culture are nominated to participate in the Joint Commission of Taiwan's Patient Safety Culture Sharing Sessions to facilitate experience exchange and learning. In 2024, five individuals from the Departments of Obstetrics and Gynecology, Nutrition, Oral Medicine, and Medical Imaging were recommended to participate.

To strengthen the leadership of management in patient safety, the Hospital also assigns supervisors to attend courses in the JCT Patient Safety Culture Sharing Sessions and regularly conducts training sessions on Team Resource Management (TRM) and resilience to enhance teamwork, communication, and responsiveness among all medical personnel.

Patient Safety Reporting

The Hospital places high importance on and actively promotes the mechanism for reporting patient safety incidents. To encourage medical staff to report proactively, the Hospital's Standard Operating Procedures for Patient Safety Reporting clearly stipulate that anonymous reporting is allowed, and the primary purpose of reporting is learning and improvement rather than punishment. For reports evaluated as having educational value or being able to substantially enhance medical quality, patient safety, and workplace safety, the Hospital provides an incentive of NT$500 per person. This is intended to foster a non-punitive organizational culture that encourages reporting, ensuring reported events receive appropriate attention and enabling learning from errors to improve the overall safety of medical care and the working environment. Regarding root cause analysis and improvement measures, in 2024 the Hospital conducted in-depth root cause analyses for five major patient safety incidents, resulting in multiple project improvement plans and a total of 27 systemic improvement measures. Among the reports deemed to have educational value in medical quality and patient safety, a total of 63 individuals received reporting incentives.

The Hospital, in accordance with the "Guidelines for Abnormal Event Reporting," has formulated a comprehensive Standard Operating Procedure for patient safety reporting, clearly stipulating the reporting deadlines and specific procedures for various types of adverse medical events. Severity Assessment Code (SAC) is adopted to classify the severity of reported events. For SAC level 3–4 events, reviews and improvements are conducted by the respective departments. For SAC level 1–2 or sentinel events, an evaluation is carried out through a pre-established decision tree. If the root cause of the event is determined to involve systemic factors, a Root Cause Analysis (RCA) is further conducted, and corresponding improvement strategies are developed. The Hospital's commitment to continuous improvement is evident in statistical data on the effectiveness of improvements made to reported patient safety events over the years.

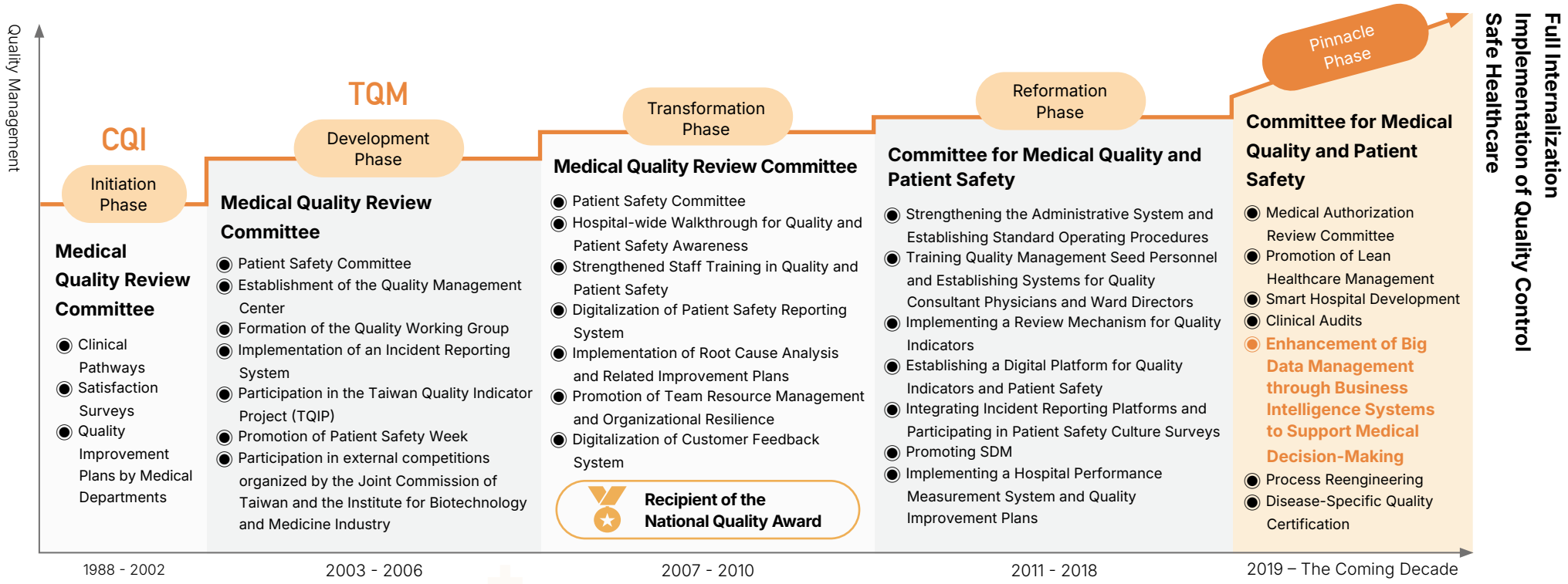
In terms of personnel training and professional development, to enhance internal RCA capabilities, the Hospital proactively cultivated internal talent in 2024, training two medical personnel to become senior RCA analysts. Demonstrating a spirit of continuous learning and advancement in the management of patient safety incident reporting, the Hospital actively engages in experience-sharing and collaboration with external medical institutions, striving to continuously improve the quality and safety of medical care.

2.2 Quality Indicator Management

2.2.1 Development of Quality Indicator Promotion

Since the establishment of the Medical Quality Review Committee in 1988, the Hospital has continuously improved related initiatives, establishing the Quality Management Center in 2004 and the Patient Safety Committee in 2006 to actively promote a culture of quality and safety. Through employee education and training as well as root cause analysis, awareness of quality and patient safety has been deeply embedded among all staff, leading to recognition by the National Quality Award in 2010. Starting in 2011, organizational restructuring was carried out to enhance the quality management mechanism, integrating the Medical Quality Review Committee and the Patient Safety Committee into the "Medical Quality and Patient Safety Committee." In 2019, lean management and smart systems were introduced to continuously optimize processes and enhance medical efficiency.

Progression of Medical Quality Promotion at NCKU Hospital

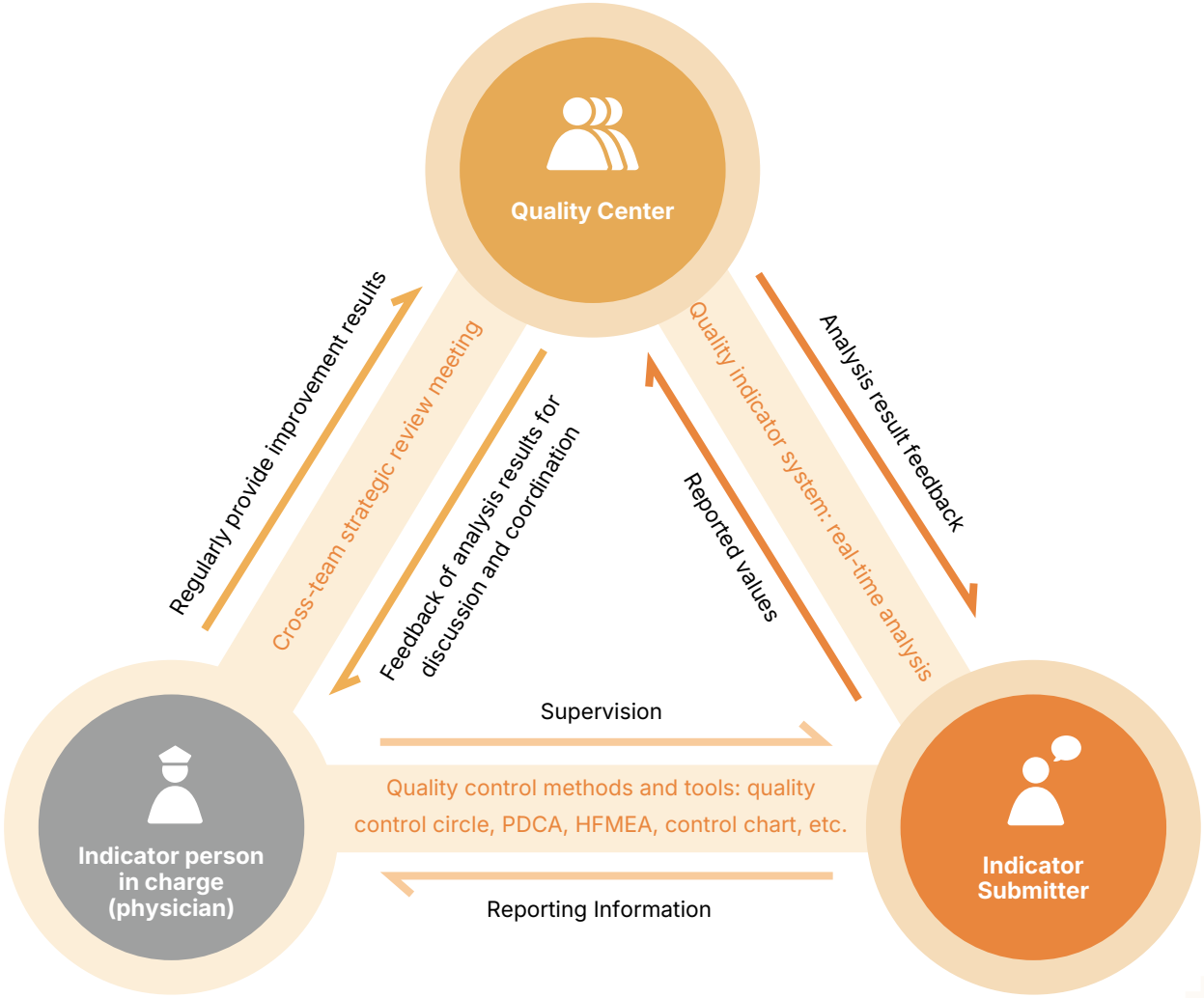


2.2.2 Continuous Improvement Mechanism for Quality Indicators

To foster a culture of ongoing quality improvement within the Hospital, each clinical unit designates both a "Quality Indicator Reporter" and a "Quality Indicator Leader." The Quality Indicator Reporter is responsible for collecting and reporting indicator data, providing data analysis, and serving as the liaison with the Quality Center. The Quality Indicator Leader, typically a physician, is responsible for planning and coordinating indicator analysis and improvement efforts, and for strengthening oversight of indicator monitoring. The Quality Center centrally manages all hospital-wide indicators and has established an information system with real-time analysis and alert functions to enhance monitoring efficiency and responsiveness, thereby cultivating a strong culture of quality improvement.

To further strengthen this culture of continuous improvement, the Quality Center promotes a dual-direction quality culture of "top-down" and "bottom-up" approaches for sustainable advancement. In addition to routine cross-team review mechanisms for indicators, the Quality Center has introduced a "Quality Consultant Physician System," appointing physicians with experience in clinical quality promotion to serve as consultants. When abnormal or warning signals appear in indicators, they are reported to the Medical Quality Indicator Task Force and reviewed strategically in collaboration with the quality consultant physicians, ensuring comprehensive improvement in quality.

Continuous Improvement Mechanism for Quality Indicators at NCKU Hospital



The Hospital monitors various clinical care indicators in accordance with its annual Medical Quality and Patient Safety (MQPS) plan, as well as its mission of "providing comprehensive medical services," and strategic goals of "delivering holistic, high-quality healthcare" and "ensuring patient safety and convenient access to care." The categories include Taiwan Clinical Performance Indicator (TCPI), Quality Improvement Program (QIP), hospital-wide common indicators, and department-specific indicators (including annual patient safety goal indicators). As of 2024, a total of 828 medical quality and patient safety indicators have been established.

Medical Quality and Patient Safety Monitoring Indicators

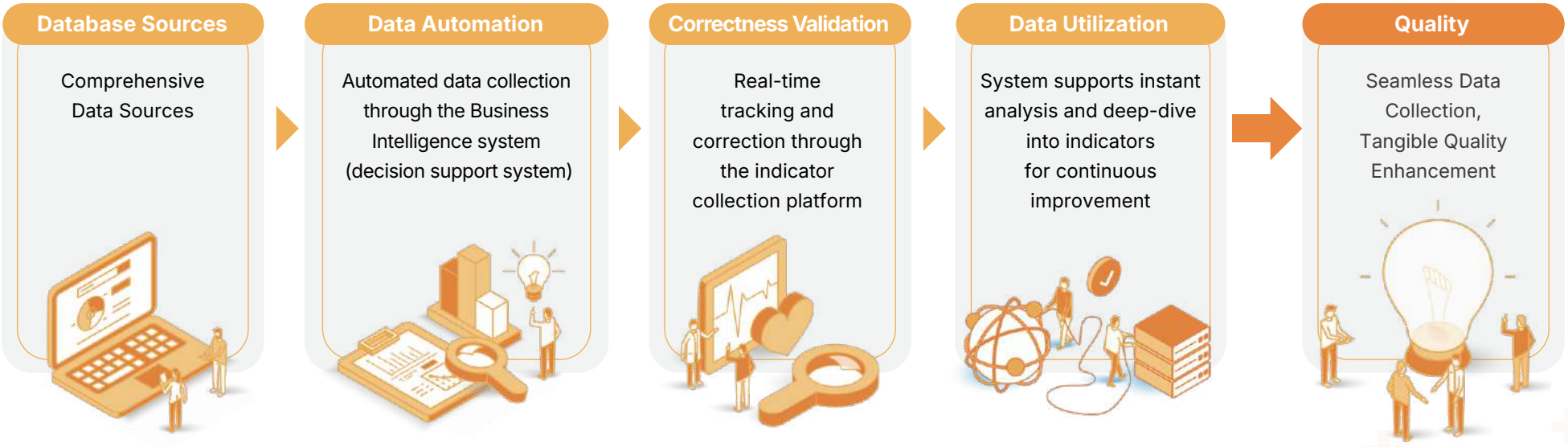
Indicator Categories	Number of Indicators			Indicator Item
	2019 - 2020	2021 - 2022	2023 - 2024	
Taiwan Clinical Performance Indicators (TCPI)	128	143	144	◉ Comprehensive Care (112 items)、Acute Psychiatric Care (32 items)
Quality Improvement Program Indicators (QIP)	51	51	51	◉ Quality Indicators (38 items)、Medical Workforce (13 items)
Global Common Indicators	4	4	4	◉ Consultations: General Inpatient, Emergency Inpatient, ER Consultations, Readmission to ER within 3 Days of Discharge
Department-Specific Indicators (Including Annual Patient Safety Goal Indicators)	458	456	629	◉ Medical, Pharmaceutical, and Allied Health Units (421 items) ◉ Administratve Units (130 items) ◉ Specialized Centers (41 items) ◉ Committees (37 items, including Annual Patient Safety Objectives) ◉ Effective Team Communication (45 items) ◉ Patient Safety Event Management (28 items) ◉ Surgical Safety (13 items) ◉ Fall Prevention (4 items) ◉ Medication Safety (9 items) ◉ Infection Control (27 items) ◉ Catheter Safety (5 items) ◉ Patient and Family Engagement (9 items) ◉ Maternal and Infant Safety (10 items)
Total	641	654	828	

2.2.3 E-Platform for Indicator Management

To enhance the efficiency of indicator management, data accuracy, automated data collection, accessibility, and real-time availability, the Hospital has established an "E-Platform for Indicator Management" to enable real-time analysis of monitoring, review, improvement, and outcomes. The platform integrates outpatient, emergency, and inpatient systems, transforming the previous manual input process into automatic data import through the hospital information system. It is also integrated with the Business Intelligence (BI) system, offering real-time query charts and data drilling features. Through a visualized interface, indicator managers can more easily interpret indicator trends and apply the insights in the strategy formulation process.

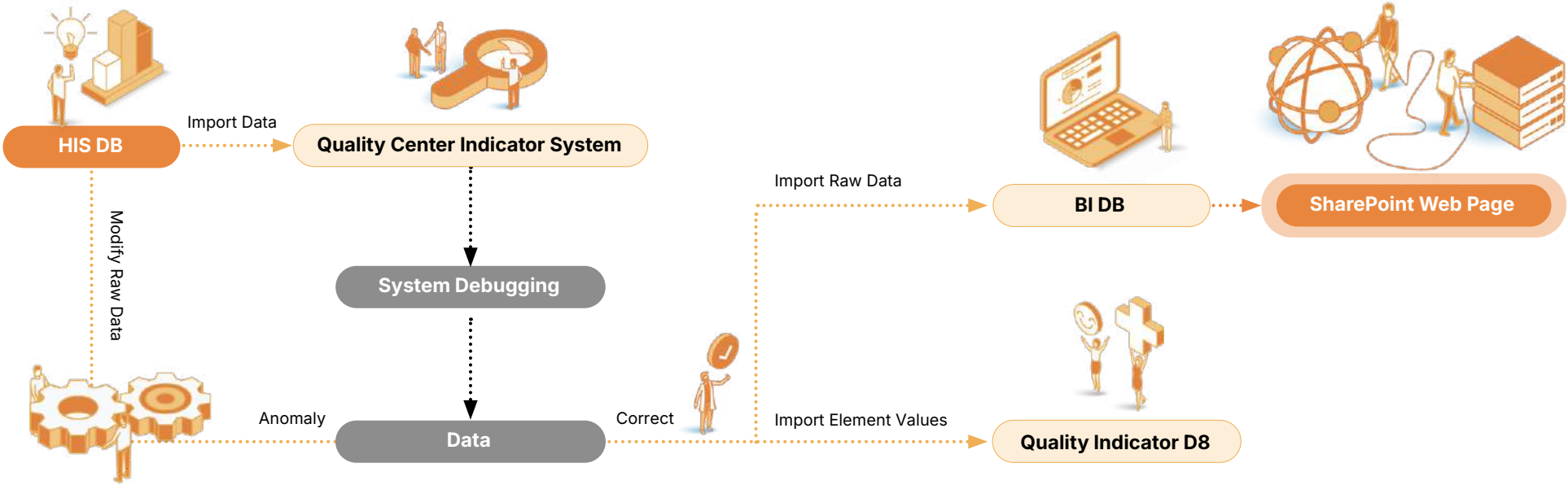
In addition, the Hospital has developed a case collection system for indicator-related diseases that integrates outpatient, emergency, and inpatient systems. This system structures an indicator information platform that imports data including patient demographics, medications, procedures and treatments, nursing guidance, and discharge follow-up management. The system assists physicians and case managers in tracking patient care progress and provides real-time checks and alerts for timely execution of disease-related procedures, tests, and medications. The data is automatically imported into the indicator platform, allowing real-time viewing of indicator performance, thus ensuring that the monitoring and management of quality indicators reflect actual conditions promptly.

NCKU Hospital Quality Indicator Informatization Platform



The Quality Indicator Monitoring System is used by indicator collection teams throughout the Hospital, guiding colleagues to follow and drive comprehensive improvement in medical quality. The system is structured to support the routine management of departmental quality indicators. Its management functions include signal indicators, improvement records, trend charts, and control charts. The system integrates a series of features for indicator improvement processes, such as automated data collection, indicator history records, trend tracking, peer comparison, statistical analysis, and review and improvement planning. Using interactive visual graphics to assist in the statistical analysis of indicator data, the platform enables users to quickly identify key insights and data. The system provides real-time, interactive features like drill-downs, charts, and analytical tools. It automatically consolidates raw case data into the collected data for each quality indicator, assisting disease-specific medical teams in evaluating performance across structure, process, and outcome indicators. Users can simply click on desired items, and the indicator system flexibly adjusts according to needs such as year, month, or department, offering multi-dimensional analyses tailored to each indicator. Through visual chart analysis, users can more quickly and conveniently understand quality indicator performance. When indicator performance falls below thresholds or is worse than that of peer medical centers, the responsible team must review it during the Medical Indicator Working Group meeting managed by the Quality Center or in the department's quality meetings. Improvement strategies should then be formulated using the system's analytical tools to strengthen indicator management effectiveness.

Quality Indicator Monitoring System Cross Analysis



2.2.4 enefits of Quality Indicator Management

NCKU Hospital firmly believes that a culture of total quality must be rooted in the daily practice of every employee. In addition to continuously monitoring indicators and stimulating improvement actions, the Hospital also implements review and reward mechanisms to ensure that quality management is embedded into each unit's daily workflow, thereby driving the sustainable enhancement of healthcare quality. With two initiatives—"Promoting Continuous Quality Improvement through Quality Indicator Management" and "Inter-Hospital Sharing and Collaborative Growth"—the Hospital earned both Silver and Gold Awards in the Taiwan Healthcare Quality Improvement Campaign, demonstrating the solid results of cultivating a deep quality culture.

Image / NCKU Hospital's Participation in Indicator-Based Competitions

Image / NCKU Hospital Wins Silver and Gold Awards for Indicator Management

2.3 Doctor-patient relationship

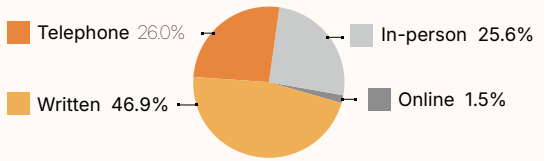
2.3.1 Patient Feedback

The Hospital values the feelings of patients and their families, has established a patient feedback handling process managed by the Quality Center, and provides multiple feedback channels, such as written forms, dedicated phone lines, email, and in-person communication.

To ensure timely handling and response to feedback, every case is proactively acknowledged on the same day it is received. The public is informed that their feedback has been received, and the incident investigation and resolution process begins immediately. Clarification and explanations are provided on the spot when necessary. The Hospital has established a monitoring indicator called "One-Day Case Closure Rate" to ensure processing efficiency. If a case requires further clarification, the Quality Center will refer the issue to the relevant unit based on the content of the feedback. After confirmation by the unit supervisor, the Quality Center will consolidate and analyze the information, submit it to the Office of the Superintendent for approval, and then provide a comprehensive reply to the public. The handling and statistical analysis results of customer feedback cases are reported quarterly to the Medical Quality and Patient Safety Committee to facilitate continuous improvement and quality enhancement. In 2024, expressions of appreciation and praise accounted for 50.4% of all customer feedback cases.

2024 Feedback Channel Statistics

Feedback Channel	Cases	Percentage
Written	1,254	46.9%
Telephone	697	26.0%
Online	686	25.6%
In-person	39	1.5%
Total	2,676	100.0%



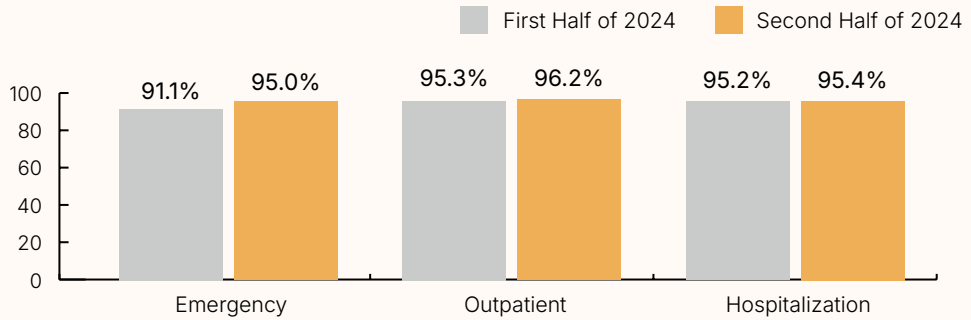
2.3.2 Patient Experience Survey

To continuously enhance the quality of medical care, the Hospital conducts patient experience surveys every April and October to extensively collect feedback and understand the current service status. The survey results serve as a basis for improvement efforts to provide higher-quality services.

The questionnaire design is based on the “Patient Inpatient Experience Survey” manual issued by the Medical Quality Policy Office of the Ministry of Health and Welfare. It covers five major aspects: “Professionalism and Care,” “Facilities and Environment,” “Waiting Time,” “Service Attitude,” and “Service Outcome.” Survey results show a steady upward trend in satisfaction across all aspects of the patient experience.

Patient Experience Satisfaction Survey Results

Year	Emergency	Outpatient	Hospitalization
First Half of 2024	91.1%	95.3%	95.2%
Second Half of 2024	95.0%	96.2%	95.4%



2.3.3 Shared Decision Making(SDM)

The Hospital’s Shared Decision Making (SDM) program assigns each medical department to establish SDM implementation themes based on the specific characteristics of various diseases. Currently, 84 SDM themes are applied in clinical practice and integrated into the order system. When a patient is identified as suitable for SDM, the order system facilitates the issuance of an SDM order and simultaneous printing of the decision aid tool, which is provided to the patient and their family to guide expression of their concerns or values, enabling the best possible joint medical decision. For example, in the Department of Nephrology, renal replacement therapies are explained to end-stage renal disease patients to assist in choosing the most appropriate treatment option and confirm future dialysis modalities. Through this process, the average patient satisfaction score reached 4.3 (with a maximum of 5), and patient anxiety levels were significantly reduced.

Shared Decision Making (SDM) Process

Steps of SDM	Facilitator	SDM Enrollment Process	Clinical Scenario
Choice Talk	Nephrologist	Physician initiates SDM for renal replacement therapy in the outpatient clinic or ward	
		Capture the patient's opinions and expectations	
		Physician issues an order and refers the patient to educators (outpatient) or HD/PD nurses/ specialist nurses (inpatient)	
Option Talk	Nurse	Nurse introduces renal replacement therapy	
		Nurse uses the PDA to guide the patient	
		Nurse discusses pros and cons, risks, complications, and lifestyle impact of renal replacement therapy with the patient	
Decision Talk	Nephrologist and Nurse	Physician discusses personal preferences and values with the patient	
	Nephrologist	Physician and patient/family discuss and select the appropriate treatment model	
	CKD Health Educator	Health educator assists with follow-up and care after the patient makes a decision	

2.4 Quality Awards

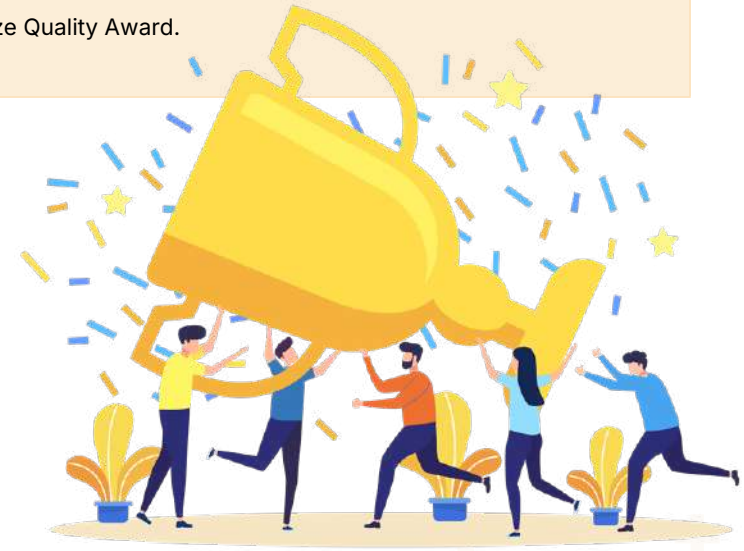
2.4.1 Medical Quality Awards and Certifications

Since 2018, the Hospital has participated in the disease care quality certification promoted by the Joint Commission of Taiwan (JCT), and has passed 11 disease care certifications. By enhancing the quality of disease care teams, the Hospital ensures accessible medical services and builds public trust and recognition.

Certification Item	Validity Period
Dementia	2022.01.01 ~ 2024.12.31
Head and Neck Cancer	2022.04.01 ~ 2025.03.31
Breast Cancer	2022.04.01 ~ 2025.03.31
Joint Replacement	2022.04.01 ~ 2025.03.31
Coronary Arteries Disease	2023.01.01 ~ 2025.12.31
Heart Failure	2023.01.01 ~ 2025.12.31
Kidney Disease	2023.01.01 ~ 2025.12.31
Chronic Obstructive Pulmonary Disease	2023.01.01 ~ 2025.12.31
Diabetes Mellitus	2023.01.01 ~ 2025.12.31
Developmental Dysplasia of the Hip	2023.04.01 ~ 2026.03.31
Cerebrovascular Accident	2024.07.01 ~ 2027.06.30

The Hospital has demonstrated outstanding achievements in enhancing medical quality and has been repeatedly recognized in several major national evaluations. These awards not only affirm the dedication of the entire staff but also highlight the Hospital's unwavering commitment to medical excellence, innovative services, and the promotion of patient well-being. The following summarizes the major awards received in 2024, showcasing the Hospital's concrete accomplishments in medical quality:

2024 External Competition	
NHQA by the Joint Commission of Taiwan	Gold Award and Creativity Award in Thematic Category, 7 Honorable Mentions; Center of Excellence Award in System Category; Gold (1), Silver (1), Bronze (1), Excellence (2), and Honorable Mention (1) in Evidence-Based Medicine Category; Silver and Bronze in Simulation Scenario Category; Bronze and Label in Smart Healthcare Solutions Category; Gold in Outstanding Healthcare Category.
SNQ Competition by the Institute for Biotechnology and Medicine Industry	Label Awards in Specialty Medical Care Group and Community Service Group.
Taiwan Continuous Improvement Competition by CECI	Silver Tower Award, Bronze Tower Award, Elite Potential Award, and Southern Regional President's Award.
Taiwan Healthcare Quality Competition by the Hospital and Healthcare Administration Association	Bronze Award in Quality Improvement Category, Best Innovative Theme Award, Honorable Mention and Selection in Quality Improvement Category, Honorable Mention in Indicator Monitoring Category, and Gold Award and Honorable Mention in Poster Category.
Quality Improvement Achievement Presentation Competition by the Taiwan Medical Quality Association	Gold Quality Award, Silver Quality Award, and Bronze Quality Award.



2.4.2 Quality Improvement Case – Example from the Department of Pharmacy

Enhancing Dispensing Efficiency through Automation

Since 2019, the Hospital's pharmacy has progressively introduced various automated equipment to improve dispensing efficiency, allowing pharmacists to dedicate more time to clinical pharmaceutical care. The outpatient pharmacy has implemented box medication dispensing machines, smart refrigerated storage cabinets, fully automated PTP blister packaging machines, and fully automated tablet repackaging machines. These systems are integrated with conveyor belts for automatic delivery, realizing a highly automated process of "medicine finding the pharmacist."

In inpatient wards, smart medicine cabinets have been installed to store 70% to 80% of commonly used medications. Nurses log in using fingerprint biometric authentication, select the patient and medication, and the cabinet automatically opens the corresponding drawer. This significantly shortens the time required to execute medical orders and reduces the workload of nurses in handling returned medications and pharmacy support staff in medication delivery.

Image / Smart Cabinet Login and Medication Retrieval

Pharmacist Team Develops "Cross-Device Pharmacy Inventory System" to Optimize Stock Management

Traditional medication inventory relied heavily on manual processes, which were time-consuming and prone to errors. To address this, the pharmacist team of the Department of Pharmacy developed the "Cross-Device Pharmacy Inventory System" in 2023. This system supports real-time data synchronization across computers, tablets, and smartphones, and features a dynamic dashboard that continuously displays the inventory progress and manpower status of each area, facilitating flexible support and re-checks of abnormal items.

Completed inventory data can be directly imported into the Hospital's inventory management system, ensuring data integrity. Since its implementation, the system has significantly reduced labor demands, resulting in a 60% decrease in total overtime hours. Moreover, user satisfaction with the system's operational fluency and mobility support has reached 95%.

Image / Smart Cabinet Login and Medication Retrieval

Development of Clinical Decision Support Systems to Enhance Pharmaceutical Care Quality

The Hospital's long-term goal is to alleviate staff workload through automation, allowing pharmacists to focus more on prescription evaluation and patient medication counseling, thereby reducing the risk of medication errors and drug interactions. To comprehensively improve the quality and efficiency of pharmaceutical care, the Hospital has actively developed clinical decision support systems and took the lead in implementing the commercial system Medi-Span® in 2019. This system fully integrates clinical data (including laboratory data, patient medical records, and medication history), converting it into knowledge to support decision-making. It also supports automatic database updates, reducing the maintenance burden on pharmacists and enhancing their work efficiency through technology.

Certification and Continuous Improvement

With emergency, critical, complex, and rare diseases as its core medical focus, NCKU Hospital is committed to public health service and actively supports government-led health policies. By integrating cross-departmental medical resources and developing high-level medical technologies, the Hospital has obtained disease care quality certification from the Joint Commission of Taiwan (JCT) in 11 areas: Coronary Arteries Disease (CAD), Heart Failure (HF), Diabetes Mellitus (DM), Kidney Disease, Chronic Obstructive Pulmonary Disease (COPD), Cerebrovascular Accident (CVA), Breast Cancer, Head and Neck Cancer, Joint Replacement, Dementia, and Infant Hip Dysplasia.

Technical Level	Medical Services (Defined According to Task Two of the Medical Center Mission)
World-Class Level	Pulmonary hypertension treatment, pancreatic cancer treatment and multinational new drug development teams, chronic hepatitis prevention and treatment
Asia-Level	Designated hospital for Helicobacter pylori antibiotic resistance and carcinogenic gene analysis, care team for epidermolysis bullosa (EB)
National-Level	Acute stroke treatment, upper gastrointestinal laparoscopic surgery and gastric tumor surgery and research, neonatal care for premature infants, multidisciplinary integrative cancer care, multiple organ transplantation, occupational disease diagnosis and treatment

At the 24th National Healthcare Quality Award (NHQA) ceremony organized by the Joint Commission of Taiwan in 2024, NCKU Hospital received a total of 36 awards and recognitions in the medical center category, including the "Outstanding Institution Award," the "20 Years of Continuous Quality Improvement Award," and the "Smart Hospital Full Institution Mark." These achievements demonstrate the Hospital's excellence in enhancing overall quality, promoting quality policies, integrating quality control activities, and planning process management, while also signifying that its overall patient safety and healthcare quality standards have become a national benchmark.

2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
C1-2 Participation in External Presentations Related to Medical Quality and Patient Safety (Including Academic Journal Publications, SNQ, JCT, Certifications, etc.)	Hospital-wide departmental publication achievement rate ≥ 60%	Departmental external publication achievement rate reached 82.1%	O
I2-1 Promotion of Quality Improvement Activities	Each department/unit completed at least one quality improvement activity, achieving a 100% completion rate	Each department/unit completed at least one quality improvement activity, achieving a 100% completion rate	O
I3-1 Development of Patient Information Security	Participate annually in the ITPS project by the Joint Commission of Taiwan (JCT)	Participated in the ITPS project by JCT	O
I1-1 Achievement Rate of Root Cause Analysis for Patient Safety Reporting Events	All adverse events to complete Root Cause Analysis (RCA) and formulate specific improvement plans within 45 days	A total of 4 RCA cases completed throughout the year, with 100% completion rate within 45 days	O
I1-2 Training for Supervisors at All Levels in Team Resource Management (TRM), Resilience, Quality Indicator Management, and Root Cause Analysis	90% of all first-level supervisors must receive at least one of the following trainings per year: TRM, resilience, indicator management, or quality improvement methodology	96.6% of all first-level supervisors completed the training	O
I1-3 Cultivation of Mid- to High-Level Leaders in Medical Quality and Patient Safety	At least 2 mid- to high-level supervisors receive training in the field of medical quality and patient safety	2 mid- to high-level supervisors received training in the field throughout the year	O
I1-4 Cultivation of Educators in Medical Quality and Patient Safety	At least 2 educators trained annually in medical quality and patient safety	2 educators trained in medical quality and patient safety throughout the year	O
I1-5 Achievement Rate for Timeliness of Care by Medical Incident Support Team	100%Complete care communication within 5 working days with 100% achievement rate	No cases throughout the year	-

2.4.3 Development of Precision Medicine

Advancement of Minimally Invasive Surgery

In response to the rapid development of medical imaging technologies and the trend toward minimally invasive and precision medicine, the Department of Medical Imaging established the "Interventional Medicine Center" in 2017. Interventional medicine, positioned between internal medicine and surgery, involves inserting catheters or other instruments into the body and guiding them using imaging techniques such as ultrasound ,X-ray or computed tomography to achieve precise diagnosis and treatment. It has been widely applied in minimally invasive procedures across cardiopulmonary, cerebrovascular, breast, and musculoskeletal systems.

Image-guided technology is one of the critical factors for the success of minimally invasive surgery, enabling real-time visualization of lesions and tissue structures. By incorporating computer navigation technologies, physicians can use Virtual Reality (VR) and 3D positioning systems to simulate the procedure in three dimensions before surgery and plan the route in advance. This model has already been practically applied in precise procedures such as atrial fibrillation ablation, lung cancer biopsy, and valve repair, significantly improving overall surgical safety and efficiency, shortening patient recovery time, and reducing the risk of complications.

Image / Joint Reconstruction Center

Building upon the aforementioned medical technologies and extensive care experience, the Department of Orthopedics established the “Joint Reconstruction Center” in 2024, providing internationally recognized integrated services, including joint disease screening, prevention, healthcare, and treatment at all stages. The Hospital’s advanced intelligent hybrid operating rooms are equipped with intraoperative real-time CT imaging and mobile fluoroscopic robotic arms. When combined with specialized spinal navigation equipment, high-difficulty spinal deformity correction surgeries can be performed, ensuring precise surgical progress and reducing the risk of nerve injury.

2.5 Friendly Medical Services

2.5.1 High-Efficiency Services

Optimization of Medical Processes

Since its establishment in 1988, the Information Office has been committed to optimizing information services and has continuously evolved with technological advancements. To enhance efficiency and flexibility, the hospital completed system reengineering between 2009 and 2013, transitioning from a closed Tandem system architecture to an X86 platform, and fully migrating to a VB.NET and MS SQL Server environment. Simultaneously, it promoted the adoption of electronic medical records and electronic signature applications.

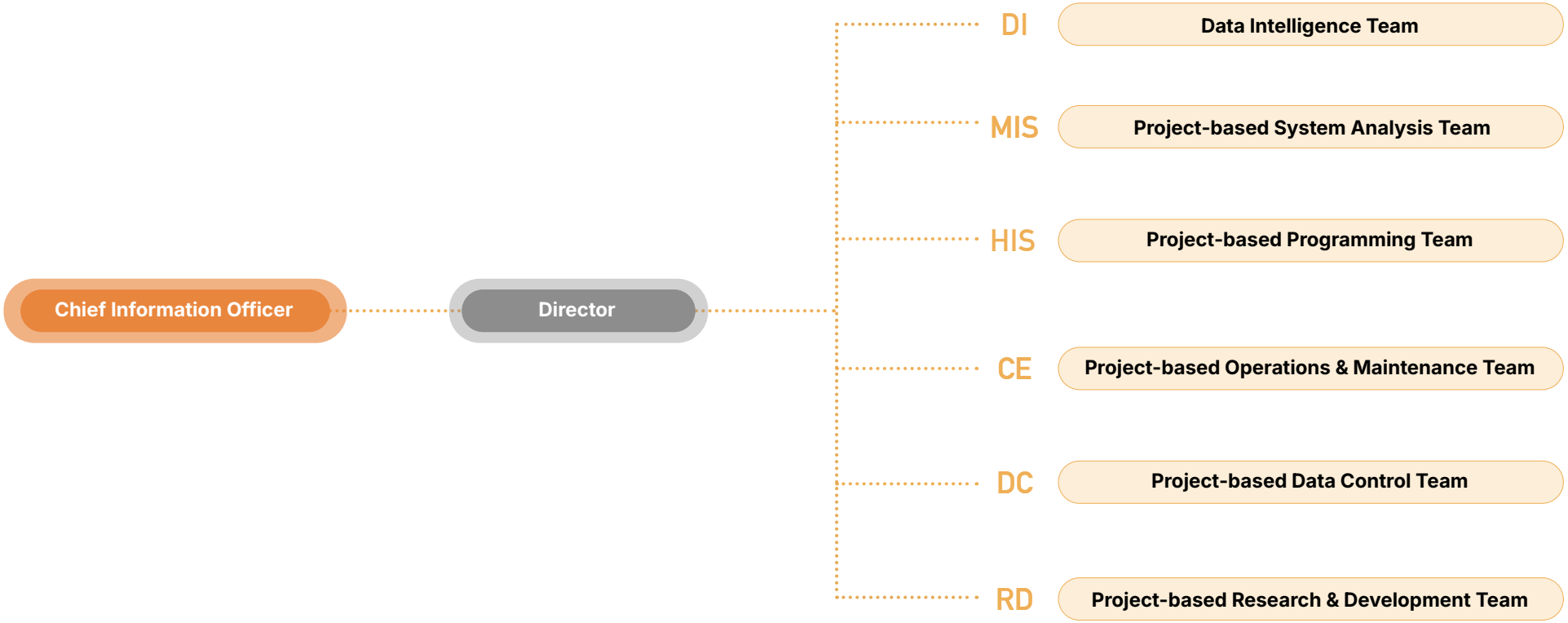
In response to the explosive growth of medical data, from 2015 to 2021, the Hospital introduced BI tools, integrating data across the entire hospital database, and established over 200 indicators across 30 departments, achieving automatic data integration and analysis, thereby improving decision-making efficiency and optimizing processes. Meanwhile, the introduction of new surgical systems , UDI , smart medication systems ,ICU Dashboard and RPage laid a solid foundation for the enhancement of medical quality.

In 2023, to meet modern application requirements and improve system operation and maintenance efficiency, the Information Office carried out differential updates of the core system and comprehensively upgraded the existing framework. This move not only reduced system maintenance costs but also improved system flexibility and scalability, laying a solid foundation for subsequent API integration and AI application.

Looking forward, NCKU Hospital will continue to introduce emerging technologies. From 2024 to 2025, it is actively implementing an API Gateway and developing the NCKU LLM GPT platform to strengthen system integration capabilities. Through AI technology, the precision and efficiency of medical services will be further enhanced, advancing steadily toward the goal of smart healthcare. For details on the Hospital's medical information infrastructure and data security, please refer to "4.2 Privacy Protection."

The Information Office reports directly to the Hospital Superintendent and is headed by a Chief Information Officer who concurrently serves as Director. The office leads the Data Intelligence Section and five major project-based teams, responsible for hospital-wide medical information system implementation, and provides 24-hour online support for computer operations. To ensure the Hospital Information System (HIS) meets the operational needs of healthcare professionals, positions such as Information Nursing Supervisors and Information Nurses have been established to communicate and assist in system planning. Through close collaboration and communication with physicians, nurses, allied health professionals, and IT technicians, user-friendly interfaces and workflows are developed to maximize the clinical benefits of smart medical systems, emphasizing not only technical operation but also clinical needs and process optimization.

Information Office Organizational Structure



NCKU Hospital has obtained the Smart Service Certification from the Joint Commission of Taiwan (JCT) in six major domains, including outpatient services, inpatient services, emergency services, surgical services, pharmaceutical services, and administrative management. The Hospital was also awarded the “Smart Hospital Organization-Wide Certification” at the 24th National Healthcare Quality Award (NHQA), demonstrating outstanding and comprehensive achievements. Looking ahead, the Hospital will continue upgrading its foundational information infrastructure and developing new systems, enabling more AI technologies to transition from the laboratory to clinical practice, thereby enhancing medical service efficiency and quality of care.

2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
F2-2 Outpatient Surgery Volume Growth Rate	F2-2 Outpatient Surgery Volume Growth Rate	Since the implementation of operating room load reduction measures in March 2024, the outpatient surgery volume growth rate, excluding labor and delivery and outpatient surgeries, was 2.67%.	×
F2-3 Ratio of Outpatient to Inpatient Chemotherapy Visits	Ratio of outpatient to inpatient chemotherapy visits Q1：1.69 ｜ Q2：1.71 Q3：1.89 ｜ Q4：1.84	Q1：1.98 ｜ Q2：1.98 Q3：1.94 ｜ Q4：1.75 In the fourth quarter, inpatient chemotherapy visits increased compared to the first three quarters; the average ratio for the full year of 2024 was 1.91.	O
F4-1 Growth Rate of Transferred-In Patients	7,500 transferred-in patients per quarter	Q1：7,908patients ｜ Q2：8,604patients Q3：8,367patients ｜ Q4：8,383patients	O
F4-2 Growth Rate of Transferred-Out Patients	7,500 transferred-in patients per quarter	Q1：6,242patients ｜ Q2：6,307patients Q3：5,938patients ｜ Q4：6,546patients	O
F3-2 Outpatient Duplicate Medication Days	Q1：less than1,334days ｜ Q2：less than1,034days Q3：less than1,233days ｜ Q4：less than1,397days	Q1：1,140days ｜ Q2：1,011days Q3：1,160days ｜ Q4：1,366days	O

Teleconsultation and Emergency Medical Services

Since 2010, the Emergency Department of the Hospital has collaborated with the Xinhua Branch of Tainan Hospital, Ministry of Health and Welfare, to implement the “Island-Hopping Strategy Project for Patients with Special Injuries and Illnesses,” establishing a safe and efficient trauma patient transfer system. This joint effort aims to protect the underserved and medically under-resourced “Five Districts in Eastern Tainan” (Xinhua, Zuozhen, Yujing, Nansi, and Nanhua), ensuring that patients receive necessary treatment at local hospitals and can be safely transferred to the medical center for appropriate care within 30 minutes.

In response to technological advancements and the rise of telemedicine, in 2022, the Hospital collaborated with the Xinhua Branch and telecommunications companies to launch the “5G Smart Mobile Emergency Multilateral Teleconsultation Platform for Pre-Hospital Emergency Services,” upgrading to “Island-Hopping Strategy 2.0.” Simulation training has been completed, and the platform is ready for activation when suitable cases arise. This teleconsultation platform integrates video communication, remote patient physiological monitoring, smart ambulances, and smart wearables (such as smart glasses), enabling the transmission of patient vital signs, first-person views from pre-hospital emergency personnel, emergency care administered at the intermediate hospital, and the ambulance transfer process. All information is immediately consolidated and delivered to the emergency physicians of the Hospital, allowing them to prepare before the patient arrives and even communicate and guide on-site in real-time. This enhances emergency response time and lays the foundation for a future smart emergency medical care model before hospital arrival.

Image/Real-time communication between the 5G ambulance and the Hospital's emergency physicians

Since 2021, the Emergency Department has also implemented the Ministry of Health and Welfare’s “Telemedicine Development Project for Remote Areas.” To date, telemedicine services have been successfully provided to over 70 patients, with an average satisfaction rate of 99%. In 2024, a total of 69 teleconsultation services were conducted. The Hospital served as the base hospital, with Kuo General Hospital and the Xinhua Branch of Tainan Hospital, Ministry of Health and Welfare, as partner hospitals, and the Aodi Emergency Medical Center of the Gongliao Public Health Center designated as the emergency medical station.

Through the “Teleconsultation System,” 24-hour emergency consultations across all specialties are provided, enhancing the quality of healthcare and accessibility for under-resourced regions within the referral network. This also reinforces emergency evacuation and referral mechanisms, thereby realizing a regional joint defense system for emergency and critical care. For more information on regional joint defense efforts, please refer to Section 3.3 “Regional Healthcare Safety Network.”

Image/Bidirectional consultation between base and partner hospitals

2.6 Patient-Centered Care

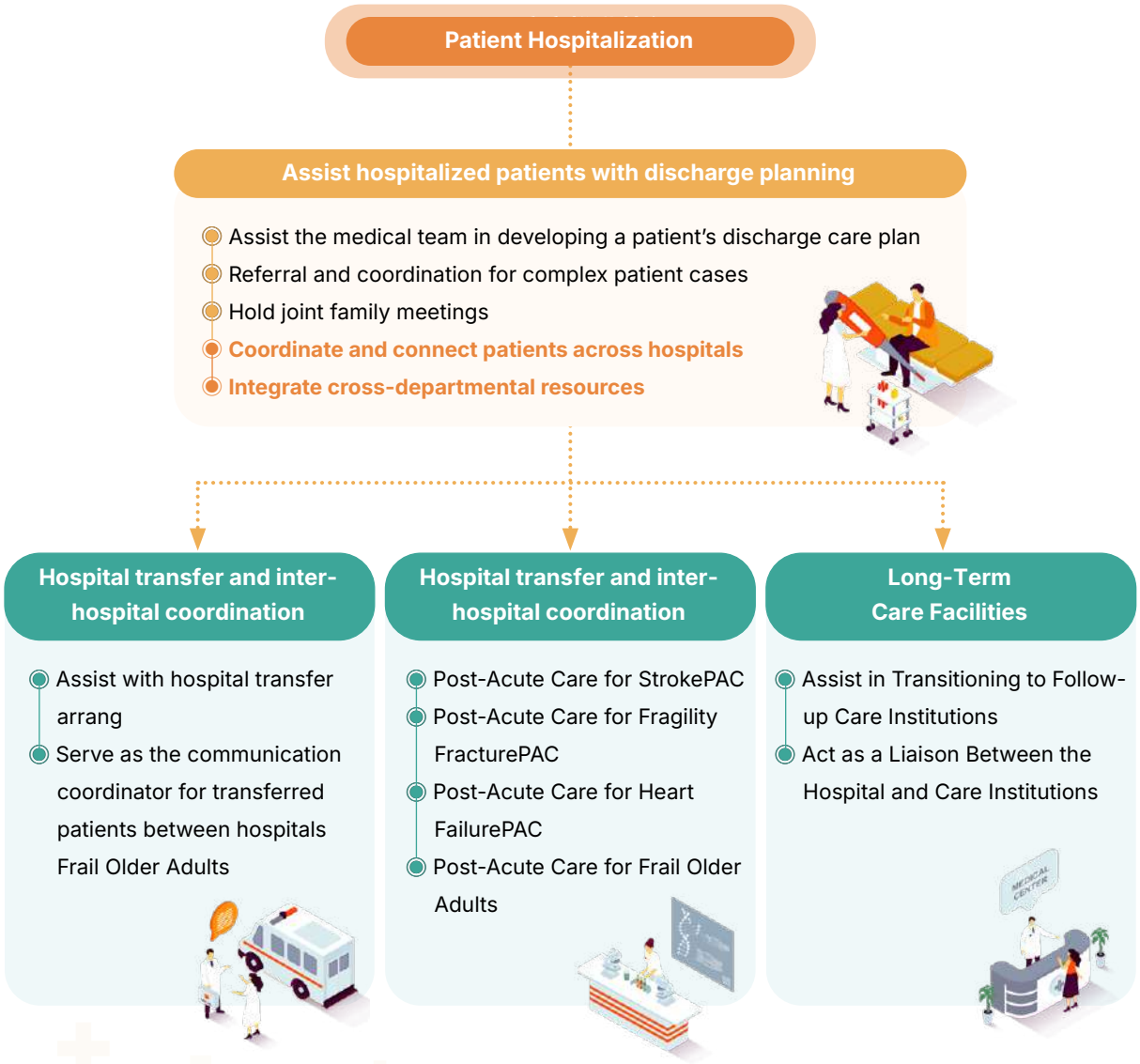
2.6.1 Seamless Patient Care

Integrated Discharge Services

To enhance the continuity of care quality after patients are discharged and admitted to care institutions, and to facilitate bidirectional communication with post-hospital institutions, National Cheng Kung University Hospital established Taiwan's first "Post-hospital Care Platform" in 2007. A comprehensive revision and optimization were completed in 2019 to enable discharge planning case managers to communicate in advance with patients' families and the target care institutions regarding transfer arrangements. After the patient is admitted, the institution director can directly access the patient's medical information on the platform (including basic information, outpatient appointments, indwelling catheters, wound status, discharge summary, physical examination reports, and key points for post-discharge care), thereby shortening the handover time between the hospital's medical team and the care institution.

In addition to reducing the time and labor required for manual information transfer, the Post-hospital Care Platform also serves as a medium for quality control. After the patient has stayed in the institution for one week, the institution director must respond on the platform and report the patient's care status to our hospital to ensure the patient continues to receive complete and continuous care after discharge.

Complete Discharge Service Process



In addition, the Discharge Planning Service Team of the Community Healthcare Center organizes two post-hospital care institution seminars each year. Professional lecturers from our hospital (e.g., the infection control team, hospice care team, wound care team, etc.) and institution directors are invited to conduct case discussions, professional courses, and exchange of opinions regarding referred patients. The professional knowledge and suggestions discussed during the meetings are compiled into records and uploaded onto the platform for institution directors to download and review. This helps establish a quality consultation mechanism between our hospital and care institutions to jointly safeguard the quality of patient care.

Image/Post-hospital Care Platform Interface

2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
F3-1 Outpatient Repeat Test Rate Within 28 Days	Maintain a low repeat test rate to avoid resource wasteQ1less than16.6% ｜ Q2 less than17.6% Q3less than17.5% ｜ Q4less than17.6%	Q1：9.50% ｜ Q2：15.00% Q3：15.00% ｜ Q4：14.91%	O
C1-1 Promotion and Implementation of Shared Decision Making (SDM)	romote four key SDM topics in clinical application with an implementation rate over 90%	The implementation rate of the four key SDM topics in clinical application all exceeded 90%	O

2.6.2 Properly Addressing Public Opinions

Accessible Feedback Channels

The Hospital has established multiple channels for the public to express opinions, including written forms, dedicated phone lines, online submissions, and on-site channels. Among these, the Superintendent's Mailbox not only provides prepaid return-written opinion forms but also includes 35 opinion boxes placed in prominent areas within the Hospital (16 in the outpatient building, 18 in the inpatient building, and 1 in the emergency department) for public submissions. These are collected daily by designated personnel except on holidays. Each submitted opinion is handled and tracked by dedicated staff from the Quality Center to provide prompt and appropriate handling and explanations, thereby enhancing physician-patient relationships and service quality.

Patient and Visitor Feedback Channels

Dedicated line：06-2766668

FAX：06-2750381

Email：hospital@mail.hosp.ncku.edu.tw

To ensure timeliness in handling and responding to opinions, 100% of feedback cases are proactively contacted on the day of receipt for understanding and processing, with clarification and explanation provided immediately when necessary. The "case closure within one day rate" is used as a monitoring indicator and is reviewed quarterly at the Quality Center meeting. The system also automatically issues notification emails to relevant departments for joint handling and clarification. All cases are documented in the Customer Feedback Management Information System, with the entire process monitored and tracked to shorten service time.

According to the content of each public opinion case, related departments are requested to provide explanations, which must be confirmed by the respective department heads. The Quality Center then compiles and analyzes the responses and submits them to the Superintendent's Office for approval. Once approved, the consolidated reply is issued to the complainant. Public acceptance rates have consistently remained above 80%.

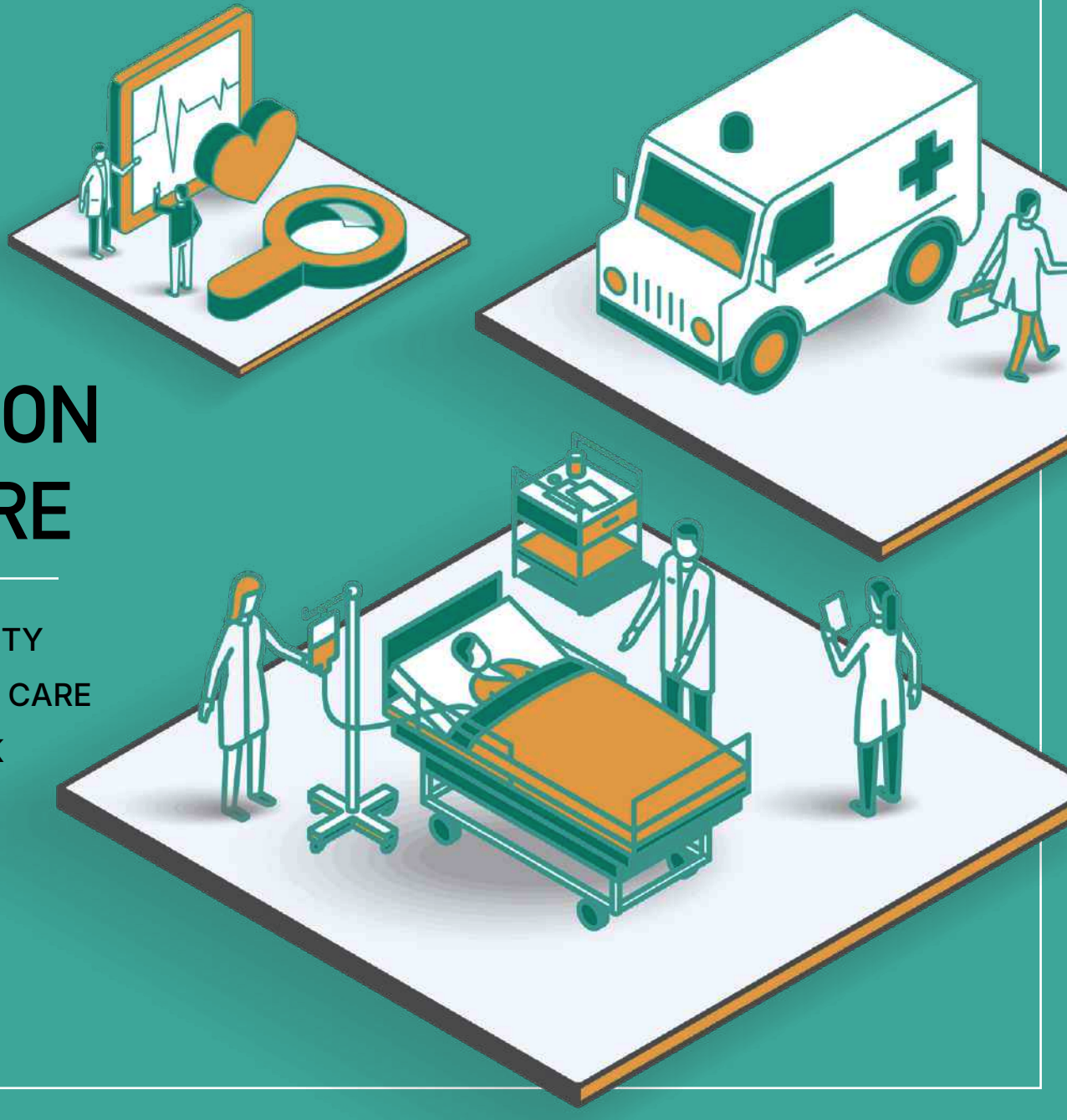
2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
C2-2 Percentage of Patient Experience Survey	Percentage of satisfaction achieved Emergency：85% ｜ Outpatient：90% ｜ Hospitalization：90%	Emergency：85% Outpatient：90% Hospitalization：90%	O
C2-3 Immediate Response Rate for Customer Complaints	Customer complaint one-day response rate 65%	Average one-day response rate achieved throughout the year: 65%	O

3

Chapter

HOLISTIC INTEGRATION AND LOCALIZED CARE



3. Holistic Integration and Localized Care

3.1 Responding to a Super-Aged Society

Material Topic	Social Responsibility and Community Engagement (Holistic Care)
Importance	◉ The Hospital bears the social responsibility and mission of fulfilling teaching, research, and service while safeguarding public health. Upholding the patient-centered care philosophy, we focus not only on the illness itself but also consider patients' physiological, psychological, social, spiritual (including hospice and end-of-life support), and cultural needs from multiple perspectives. The holistic care concept is implemented not only within the Hospital but also extended to the community, deepening its practice across various levels of society.
Influence and Impact	Positive / Actual / Governance: Holistic care emphasizes preventive medicine and integrated care, helping reduce acute disease deterioration, hospitalization, and readmission rates, thereby lowering medical costs. Positive / Potential / Social: Promoting cross-disciplinary, inter-ministerial, and industry-government-academia collaboration drives industry needs and facilitates healthcare industry transformation. Positive / Potential / Social: Advocating for holistic care by combining environmental and dietary habit improvements helps promote a sustainable lifestyle. Negative / Potential / Governance: Establishing cross-disciplinary teams, integrating hospital and community information systems, and talent training require high economic and time costs.
Policies	◉ Establish an employee assistance hotline and EAP. ◉ Promote telecare or collaborative care models. ◉ Introduce "SDM Decision Aid Generation System."
Strategies	◉ Form cross-professional teams integrating medical staff, social workers, and psychologists to provide patients with holistic physical, psychological, and spiritual care. ◉ Implement case management system to track treatment effectiveness and living conditions post-discharge, reducing readmission. Center the service process on the patient and establish feedback mechanisms for improvement goals. ◉ Promote community health promotion programs, seminars, and mobile medical services in remote areas. Cooperate with local government resources and seek subsidies and project collaboration. ◉ Launch a care mechanism with designated personnel for communication, install hotlines and suggestion boxes to quickly respond to patient concerns. ◉ Regularly review manpower allocation and reward systems.

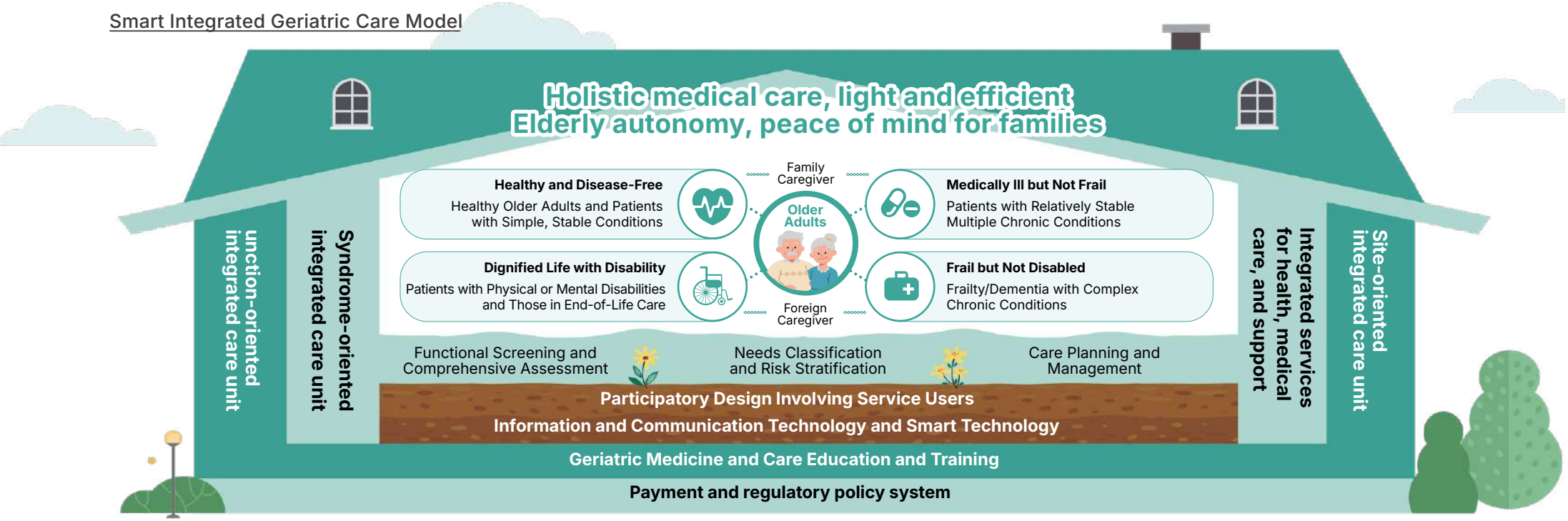
Material Topic	Social Responsibility and Community Engagement (Holistic Care)
Goals & Objectives	**Short-Term Goals (2025–2026)** ◉ Establish community profiles through community health surveys to understand the needs of elderly, chronically ill, and disadvantaged groups as the basis for service. ◉ Form care teams with cross-professional members (e.g., social workers, nurses, nutritionists, psychologists) for regular education and outreach visits. ◉ Build local institutional cooperation mechanisms, such as partnerships with village offices and long-term care institutions, to create resource networks. ◉ Define the hospital's social responsibility commitments and annual key actions, such as mobile clinics in remote areas, elderly/disadvantaged care in communities, and environmental sustainability promotion. **Mid-Term Goals (2027-2030)** ◉ Strengthen home and community care capabilities by integrating cloud-based medical records, mobile health management apps, and home healthcare systems, developing intelligent community care platforms. ◉ Regularly hold community forums and satisfaction surveys to incorporate community feedback into hospital decision-making. **Long-Term Goals (Post-2030)** ◉ Establish a community-integrated care system linking hospitals, clinics, and long-term care facilities to form a community health support network. ◉ Act as a community health leader assisting local governments in implementing health policies. ◉ Build talent databases for community health educators, care ◉ assistants, and health promotion lecturers to cultivate health ◉ promoters and empower community self-care capacity.
Management Evaluation Mechanism	◉ Hold hospital administrative and medical affairs meetings quarterly to discuss business with the superintendent. ◉ The Sustainability Office holds monthly meetings to develop strategic sustainable development goals and project plans.
Performance and Adjustment	◉ A total of 766 activities were held in 2024. ◉ Long-term care services accepted over 1,441 cases. ◉ The Heart Failure PAC Team won the Gold Award in the "Taiwan Healthcare Quality Competition" in 2024. ◉ In 2024, collaborated with 18 medical institutions to provide care for high-risk pregnancies and newborns (including preterm infants). ◉ Held over 10 child protection seminars in 2024, extending cooperation to social welfare organizations and co-hosted the "428 Child Protection Day" campaign with the Taiwan Fund for Children and Families. ◉ In 2024, the nutritional meal service served 33 individuals with a total of 8,283 meals.

3.1.1 Wall less Health Care

Integrated Geriatric Care

Taiwan has the fastest growing elderly population in the world and is expected to enter a super-aged society by 2025. The medical system is thus facing unprecedented challenges. NCKU Hospital is one of the few hospitals in southern Taiwan that offers specialized training in geriatric medicine. In 2019, the Department of Geriatric Medicine was established, followed by the Preparatory Office for the NCKU Geriatric Hospital in 2020. In 2022, the Department of Geriatrics was integrated into the Department of Internal Medicine. The Hospital has already integrated specialties including family medicine, rehabilitation medicine, neurology and psychiatry, nursing, physical therapy, social work, pharmacy, and nutrition to form a cross-disciplinary care team. This team promotes a "smart integrated geriatric care model centered on intrinsic capacity," aiming to build a larger healthcare ecosystem to alleviate the burden on healthcare units and caregivers.

Smart Integrated Geriatric Care Model



To promote transformation in contemporary health care, the Smart Integrated Geriatric Care Model is built upon four core pillars: Health, Integration, Technology, and Ecosystem. Its objective is to connect home, community, and hospital care, establishing care solutions that are functional health-oriented, syndrome-oriented, and setting-oriented, thereby addressing the diverse needs of the elderly.

Four Core Pillars of the Smart Integrated Geriatric Care Model

1

Health

Improve older adults' internal health strength
Take care of overall (whole-person) health

2

Integration

Design personalized health care and management for each specialty

3

Technology

Use information and smart technology
Connect elderly people with professional information

4

EcoSystem

Build a "wall-less" hospital linking home, community, and professionals to form a health ecosystem

"Function-Oriented" care solutions focus on the health of older adults in their daily functions, such as swallowing and chewing, nutrition, urinary function, mobility, sleep health, and cognitive and emotional well-being. These services are delivered through an integrated approach involving cross-disciplinary and cross-setting collaboration. The "Syndrome-Oriented" care unit addresses multiple chronic conditions in the elderly, including cardio-metabolic-renal syndromes, neurodegenerative disorders, and musculoskeletal diseases. The "Setting-Oriented" integrated care unit centers around various care environments—outpatient, inpatient, emergency, home, community, and long-term care institutions—by utilizing an integrated health information platform to connect home, community, and hospital-based care.

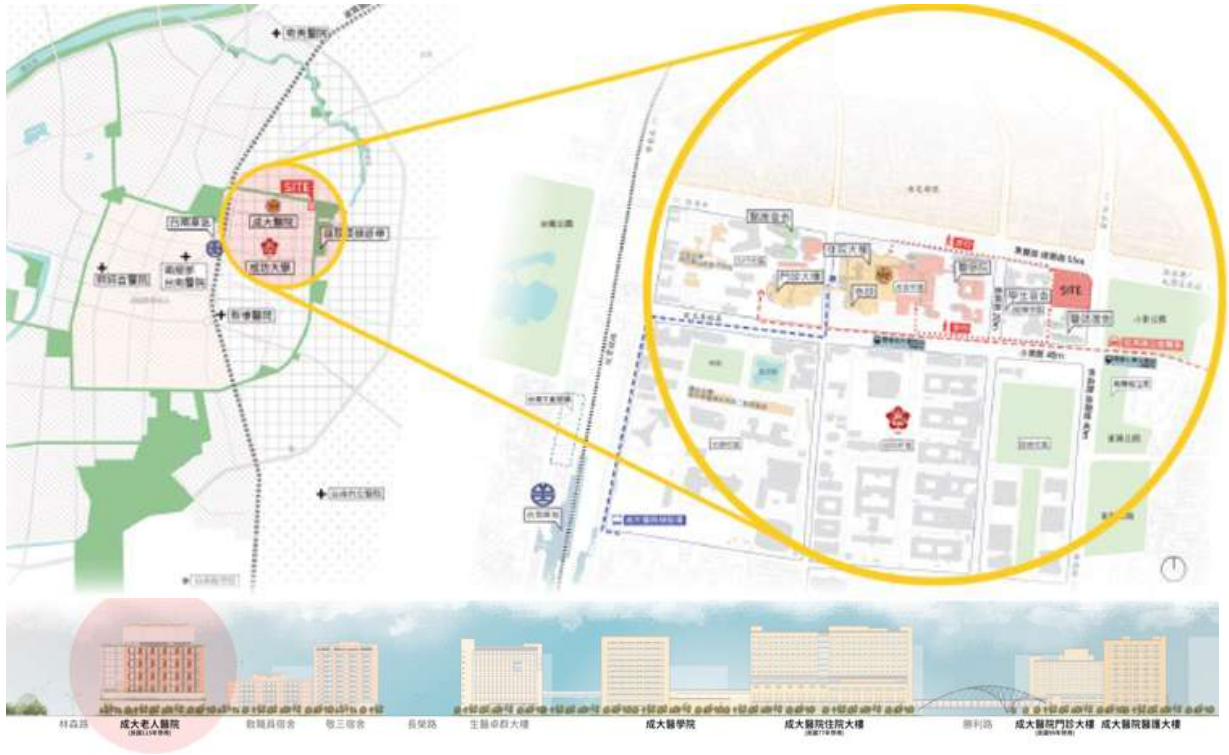
Taiwan's First Geriatric Hospital

In response to national and local long-term care policies, as well as the projected massive care demands of a super-aged society, the Hospital is planning to establish a dedicated Geriatric Hospital at the Cheng Kung University Ching Yeh Campus. Serving as a hub connecting hospital, community, and home, the facility will incorporate the development and application of smart medical technologies to deliver comprehensive, dedicated care to elderly residents of Greater Tainan. This will mark the transformation of the Hospital from a traditional medical provider into an integrated platform for health promotion, disease prevention, medical care, and life support for older adults—offering an innovative model for health and care services that can serve as a valuable reference for medical institutions across Taiwan.

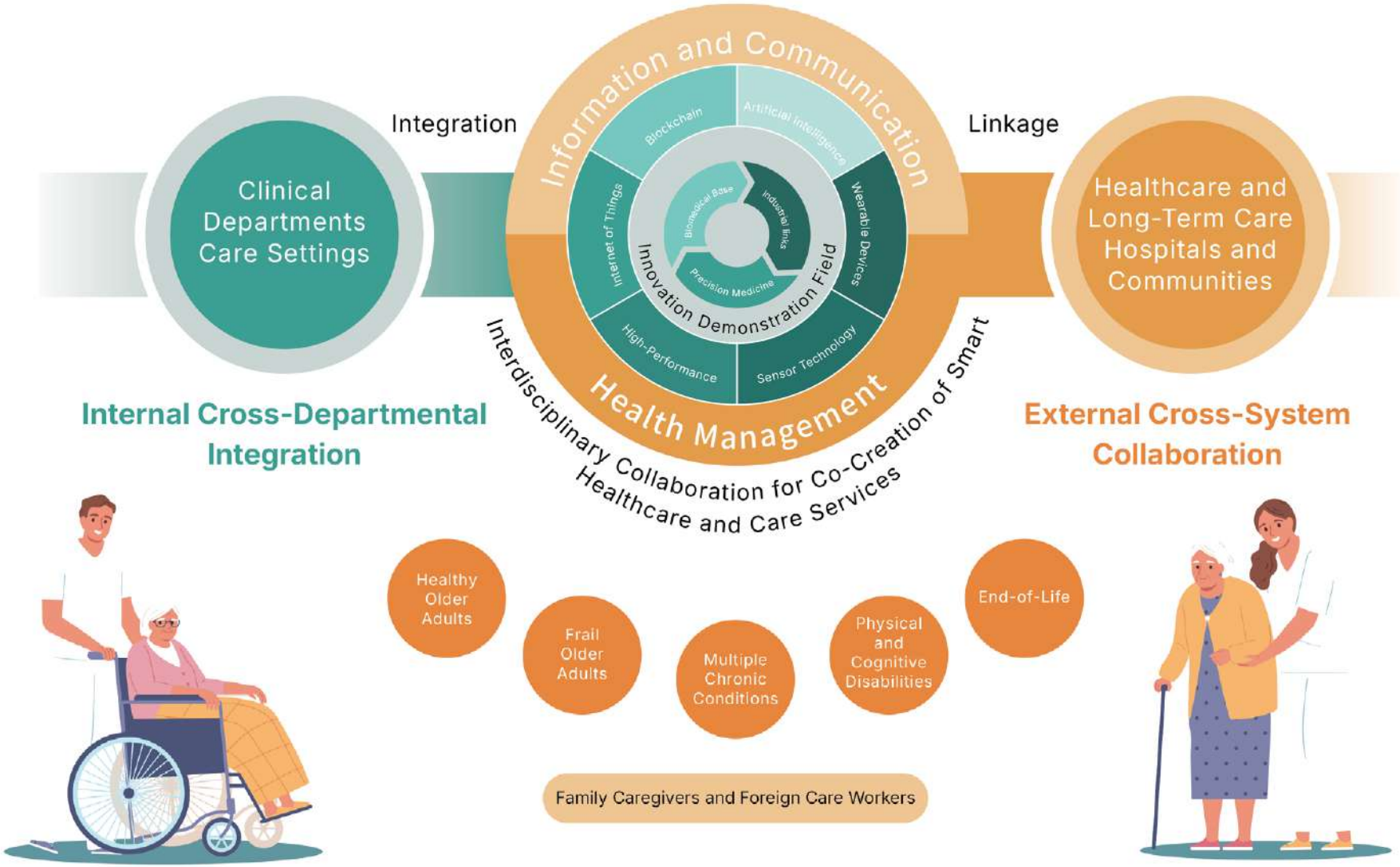
Construction of Taiwan's first Geriatric Hospital began in 2021. The building is designed with five underground levels and twelve above-ground floors, housing approximately 450 beds to provide more comprehensive post-discharge continuous care. By integrating smart technologies, clinical data analytics, and mobile care models, the facility aims to refine the elderly care process—seamlessly transitioning patients from acute care to subacute care, rehabilitation, long-term care, and eventually home-based support.

In addition, the Hospital plans to establish an Education Center for the Development of Smart Geriatric Medical and Care Services. This center will focus on education, research, and innovation in geriatric medicine, elderly care, and smart medical technologies. It will help cultivate physicians, nurses, and caregivers well-versed in the unique medical needs of older adults, driving the transformation of the healthcare workforce toward an age-friendly structure.

Geriatric Hospital Site Location



Integrated Smart Medical and Care Model



Integration of Health Care Resources

To implement the "Wall-less Hospital" policy and shift elderly care from hospitals into communities and homes—realizing a people-centered model of aging in place—NCKU Hospital established the "Community Health Care Center" in 2020. This center integrates previously independent units such as the Discharge Planning Committee, Post-Acute Care (PAC), Home Medical Care and Home Nursing Services, Long-Term Care Units A and B, Community Healthcare Groups, the Cheng-Hsing Medical Alliance, and remote area medical services into four major divisions. Cross-functional and vertical communication among these divisions has been strengthened to achieve the goal of becoming a national benchmark in community health care, thereby benefiting the public.

Community Health Care Center			
Discharge Planning Services Section	**Home Medical Care Section**	**Long-Term Care Section**	**Community Integrated Care Section**
◉ Discharge Planning Services ◉ Post-acute Care (PAC) ◉ Referral to Long-Term Care 2.0 ◉ Referral to Follow-up Care Resources (e.g., Institutional Referral, Disability Resources)	◉ Home Medical Care ◉ Intensive Home Medical Care ◉ Pilot Program for Acute Care at Home(ACAH)	◉ Long-Term Care Services ◉ Long-Term Care Case Management Services (Northern and Eastern Districts) ◉ Long-Term Care Professional Services ◉ Integration of Long-Term Care and Medical Resources	◉ Community Healthcare Network ◉ Community Health Promotion Activities ◉ Disability Prevention and Delay ◉ Medical Services in Remote Areas ◉ Senior Fitness Club ◉ Trendy Smart Health Station

As Taiwan enters a super-aged society, the number of people requiring long-term care and medical services continues to rise, highlighting the growing importance of preventive medicine. In response, NCKU Hospital has made "the implementation of preventive medicine" one of its key strategies, in addition to continuously enhancing post-discharge continuity of care. By building a diverse and collaborative health promotion network, the Hospital encourages the public to shift from passive treatment to proactive health management. This aims to reduce the prevalence of chronic diseases, multiple comorbidities, disability, and dementia, ultimately lowering overall healthcare expenditures and alleviating the caregiving burden on families—thus realizing the vision of aging in place with autonomy and dignity.

Image/ Medical, Teaching, and Research Collaboration Signing Ceremony

In addition, the Hospital is actively promoting inter-hospital collaboration toward wall-less development. Building on the strong relationships formed with public hospitals during the COVID-19 pandemic, in 2023 the Hospital signed a memorandum of understanding with six Ministry of Health and Welfare-affiliated hospitals in the Chiayi–Tainan region. This collaboration aims to enhance the triage of mild and severe cases, leverage the strengths of hospitals at different levels, and deepen cooperation in medical care, teaching, and research, contributing to the establishment of a sound medical ecosystem in Southern Taiwan.

3.1.2 Healthy Aging

Health Assessment for the Elderly

In recent years, in addition to the World Health Organization (WHO) promoting integrated care for older people (ICOPE), Health Promotion Administration has also actively advanced the “Six Functional Domains for the Elderly” screening initiative. To detect potential health issues early and prevent or delay disability, NCKU Hospital continues to conduct community health promotion campaigns. These include free screening events held during themed holiday programs, offering health promotion and lifestyle advice to encourage seniors to maintain healthy behaviors. In 2024, a total of 766 activities were organized.

In addition to promoting ICOPE, the Hospital helps older adults better understand their own health conditions. Based on each case, seniors are either referred early to the Hospital’s special clinics or provided with cooperative health management through local clinics. These efforts support the sub-healthy elderly population in maintaining good health and high quality of life.

To reduce the risks faced by elderly individuals due to oral frailty—such as sarcopenia, frailty, dementia, falls, and being bedridden—NCKU Hospital established a Chewing and Swallowing Integrated Care Team in 2020 under the Geriatric Education Division of the Preparatory Office for the Geriatric Hospital. The team is composed of more than 30 interdisciplinary professionals. In 2023, the Hospital further launched the Chewing and Swallowing Integrated Special Clinic to provide individualized diagnosis and care, and upgraded the original care team into the “Chewing and Swallowing Center.” The Center strengthens collaboration with NCKU’s Institute of Computer and Communication Engineering, Institute of Biomedical Engineering, National Health Research Institutes, and the Institute of Food Science, among other academic, governmental, and industry partners, while expanding public education activities for community members.

Image / Health Education and Screening Activities Conducted

On the other hand, diabetes is not only one of the top ten causes of death in Taiwan, but also a major risk factor for diabetic nephropathy, cardiovascular disease, stroke, visual impairment, cognitive decline, and dementia. Therefore, the Hospital’s Diabetes Prevention and Treatment Center not only provides integrated care and continues to promote health education in the community, but also supports clinical internships and training for healthcare personnel in collaboration with relevant units. In the future, the Center will collaborate with the newly established “Dongyuan Diabetes Research Center” at NCKU College of Medicine in 2024 to promote translational medical research, integrate industry-government-academia resources, and enhance the medical care and quality of life for people with diabetes in Taiwan.

2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
S1-1 Community Health Promotion Activities	More than 200 community health promotion and screening events held	A total of 766 events conducted	O

Community Empowerment

"Frailty" is a geriatric syndrome that is often overlooked but has far-reaching impacts. Its symptoms include weight loss, reduced muscle strength, slower walking speed, fatigue, and decreased physical activity. Without timely intervention, frailty increases the risk of falls and disability, posing a dual challenge to family caregiving and social resources. Exercise intervention helps delay or prevent the progression of frailty into disability, reduce fall risks, and postpone entry into the long-term care system. To enable early detection and intervention for geriatric syndromes, NCKU Hospital actively collaborates with communities. In 2022, the "NCKU Ren-Ai Senior Fitness Club" was established at the Ren-Ai Community Activity Center in the Northern District, providing an age-friendly exercise venue to help the elderly maintain or improve their health through appropriate physical activity, nutrition, and social engagement.

Image / "Cheng-Yi Shi-Zu" Community-Integrated Health Care Site

The "NCKU Ren-Ai Senior Fitness Club" not only serves as an age-friendly exercise venue but also functions as a referral point for outpatient clinics and Long-Term Care Type A units (Community-Based Integrated Services Centers), extending the hospital's community care services. The program is conducted in collaboration with the NCKU Department of Industrial Design, the Center for Sports Science and Healthy Aging Industry, the NCKU Hospital Departments of Social Work, Nursing, and Geriatrics. It also provides a platform for community service learning for students, community-based training and internships for staff, and volunteer opportunities for retired NCKU employees. Retired volunteers with medical backgrounds assist with blood pressure monitoring, venue maintenance, and health consultations. The exercise programs focus on integrated training such as strength, aerobic, balance, and flexibility exercises, aiming to enhance physical function and improve the quality of life of older adults. Fifteen group classes are held weekly, led by certified fitness instructors, serving an average of 300 participants per week.

In addition, NCKU Hospital has collaborated with Ren-Ai Hospital and Yi-Shiang Fitness Club for Seniors and Special Populations to establish a community-integrated health care demonstration site—"Cheng-Yi Shi-Zu." This facility officially opened in 2024 at the former site of the Deguang Church in the Eastern District. It integrates the professional resources of the Hospital's Long-Term Care Type A unit and leverages the multidisciplinary medical expertise of the Hospital to carry out community health promotion activities and health screening services tailored to the needs of an aging and locally rooted community, creating a localized health promotion hub.

The Hospital continues to promote the integration of community health building and long-term care services. In addition to organizing community activities, visiting borough chiefs, and holding liaison meetings to educate the public on long-term care services, the Hospital also encourages community volunteers and borough chiefs to refer cases in need. This proactive approach helps monitor the health conditions of local residents, reduce the number of disability cases, and prevent delays in seeking medical care.

2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
S1-2 "Community Integrated Services – Type A Unit" Long-Term Care Service Recipients	ong-term care service recipients exceeded 1,200 people	Cumulative total: 1,441 recipients	O

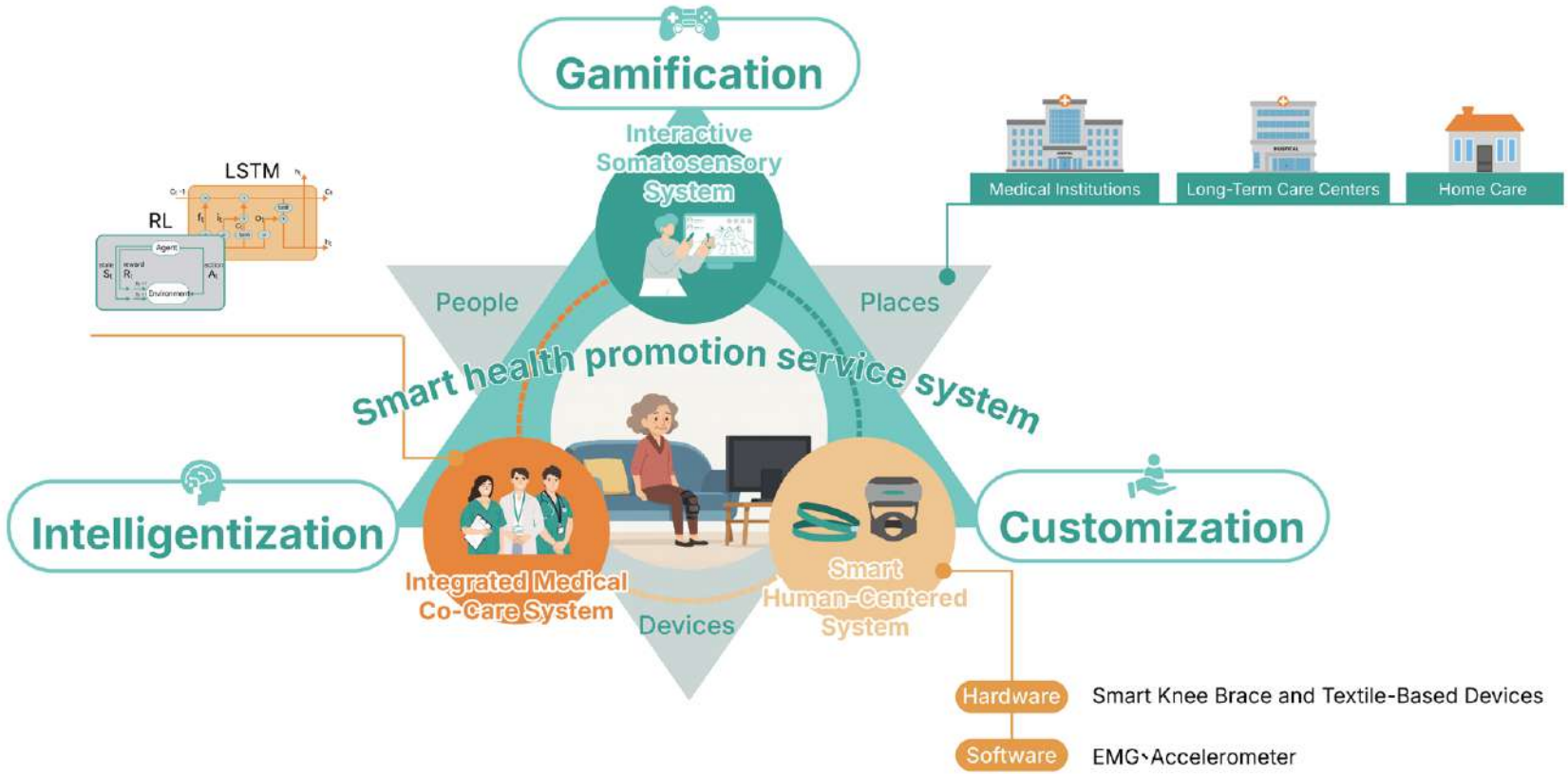
Smart Technology for Health Promotion

The Hospital's Community Health Care Center has partnered with Dynasty Clinic, a fellow member of the Tainan Diabetes Shared Care Network, to establish the "NCKUH Dynasty Smart Health Station" on the first floor of the clinic. The station features smart fitness equipment in an open space setting, embodying a spirit of public welfare and serving as a self-health promotion venue for people of all ages in the community. Officially launched at the end of 2024, the station integrates a comprehensive platform system and intelligent physical fitness devices, enabling users to instantly obtain exercise records and health reports after each session. Situated within a primary care facility, the Smart Health Station conveniently incorporates adult health checkups and preventive care services, offering accessible, community-based preventive medical services such as prevention and management of the three highs (hyperglycemia, hypertension, hyperlipidemia), diabetes care, and hypertension management.

Image / NCKUH Dynasty Smart Health Station

To reduce the challenges of follow-up management in health promotion and ease the care burden on healthcare providers, the Department of Physical Medicine and Rehabilitation at NCKU Hospital collaborated with aiFree Interactive Technology Co., Ltd. to develop a new intelligent rehabilitation aid—the "Smart Health Promotion Service System."This system enables sub-healthy and functionally impaired individuals requiring muscle strength training to undergo rehabilitation at home. By incorporating nostalgic games that resonate with the elderly, it enhances their motivation for rehabilitation. During training, the system detects the condition of various muscle groups to assess the frailty level of older adults, helping professionals deliver the most accurate rehabilitation plans. Physicians can also use professional analysis reports to maintain ongoing interaction with patients and their families, thereby reducing the consumption of medical resources and improving the user's quality of life. This service received the 2023 National Healthcare Quality Award – Outstanding Healthcare Award.

Design Objectives: Gamification, Customization, and Smartization

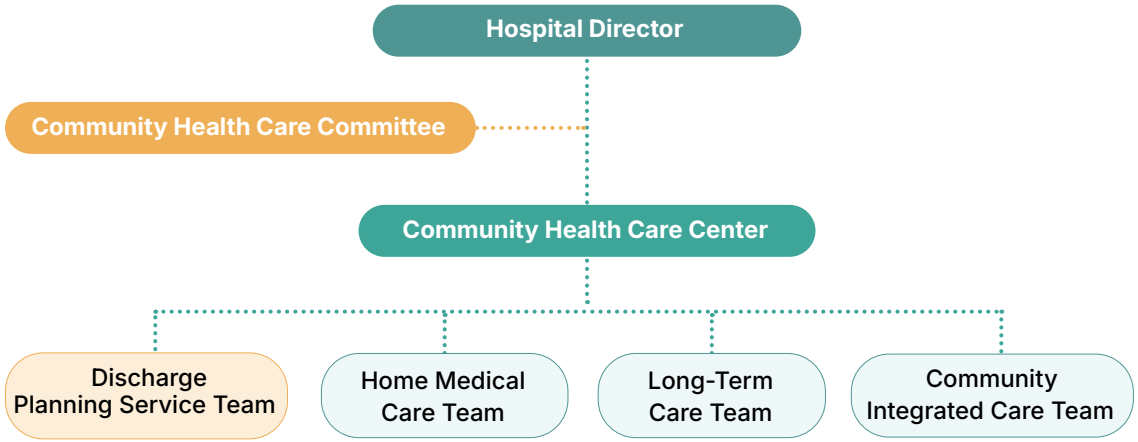


3.1.3 Medical Triage

Community Health Care

The Community Health Care Center, established by the Hospital in 2020, has the core mission of building “patient-centered holistic integrated care,” integrating “seamless care across hospital, community, home, and long-term care,” and establishing a “tiered health care network connecting medical centers, regional hospitals, and primary clinics.” As such, the original Discharge Planning Service Committee and Health Promotion Committee were merged into the “Community Health Care Committee.” Based on different core missions, four major units were established: the Discharge Planning Service Section, the Home Medical Care Section, the Long-Term Care Section, and the Integrated Community Care Section, to provide the public with the necessary health care services at various stages and to realize the principles of medical tiering and the wall less hospital concept.

Organizational Structure of the Community Health Care Center



Upon admission, change in condition, or within 24 hours of transfer, an initial screening for discharge planning services is conducted by a clinical nurse to assess the patient’s current hospitalization status and potential post-discharge care needs. If the patient meets the hospital-wide or the six major medical system case acceptance criteria, a secondary screening is conducted within 72 hours. Based on individual needs, appropriate guidance and evaluation are provided. Subsequently, physicians and nurses assess the patient's physiological, psychological, social, and functional needs and, via the Hospital’s joint referral system, consult with cross-functional team members to arrange services such as disability certification, assistive device assessment, publicly funded placement, diversified rehabilitation, PAC (Post-Acute Care), or referrals to follow-up care institutions. The inter-institutional case manager for discharge planning services or the dedicated PAC case manager serves as the contact point for resource coordination.

In the past three years, 716 cases , 766 cases , and 896 cases were referred for Long-Term Care 2.0 applications, and 437 cases,402 cases and 437 cases were referred to PAC services, both showing an increasing trend. After discharge, unit nurses follow up by phone within three days to check the patient’s status and document the outcome. If the condition is stable, the case is closed; if necessary, a second follow-up call is conducted within seven days. All processes and outcomes are recorded in the medical records, ensuring the implementation of medical tiering while properly addressing patient needs.

2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
F2-1 Bed Turnover Rate	Q1 ≧ 3.23 ｜ Q2 ≧ 3.27 Q3 ≧ 3.44 ｜ Q4 ≧ 3.39	Q1：3.59 ｜ Q2：3.65 Q3：3.65 ｜ Q4：3.80	O

Post-acute Care (PAC)

There are a total of 15 hospitals cooperating with the Hospital for PAC referral, among which 6 hospitals are authorized to implement the home-based model. The Hospital has appointed four dedicated “PAC case managers” (covering stroke, fragility fractures, frail older adults, and heart failure) to serve as the liaison among the medical center, family members, and the contracted hospitals. These case managers are responsible for assessment, health education, development of interdisciplinary care plans, coordination of referrals, connection with community resources, follow-up management, and monitoring of quality indicators. In 2023, 29 cases were referred under the PAC home-based model and 3 under the day care model. In 2024, 26 cases were referred under the PAC home-based model and 19 under the day care model.

2024 PAC Program Statistics

Item	Covering Stroke	Fragility Fractures	Frail Older Adults	Heart Failure	Total
Number of Patients (persons)	259	428	66	63	816
Number of Referrals/Admissions (persons)	231	228	40	49	548
Referral/Admission Rate (%)	89.2	53.3	60.6	77.8	67.2
Remarks: Cases of covering stroke, fragility fractures and frail older adults are referral cases, while only heart failure cases are admission cases.					

In addition to facilitating the proper allocation of medical resources, the NCKU Hospital PAC team has also continued to improve its case management capabilities and actively participated in quality indicator competitions. In 2023, the team received the Excellence Award in the “Southern Region Integrated Post-Acute Care Model Program” by the Southern Regional Healthcare Network. In 2024, the Heart Failure PAC team was further recognized with a Gold Award in the “Taiwan Healthcare Quality Award.” The Hospital also co-organized the “Post-Acute Care Training Course for Frail Older Adults” with the Tainan City Public Health Bureau to train new talent and enhance the region’s overall ability to care for PAC cases. Furthermore, the Hospital’s Stroke PAC team achieved the third-highest referral rate among all medical centers nationwide in both 2022 and 2024, demonstrating the Hospital’s active promotion of the PAC program and effective implementation of the hierarchical medical care policy.

It is worth mentioning that stroke patients must receive thrombectomy within the golden window of three hours after onset to reduce the risk of severe sequelae. With the support of a comprehensive stroke team, the Hospital ensures that patients receive the best possible treatment and care.

For details regarding emergency medical services, please refer to Section 3.3.2 “Greater Tainan Emergency Medical Services.”

Image / Gold Award – Taiwan Healthcare Quality Award

Home Medical Care – Acute Care at Home (ACAH)

In order to enhance the integration of medical care and long-term care services and allow more elderly people to “age with support, age with care, and achieve local end-of-life care,” NCKU Hospital has established a cross-departmental team to integrate resources from nearby regional hospitals, primary care clinics, and home nursing institutions, dedicated to building a comprehensive acute care at home (ACAH) network. A telemedicine platform is adopted to strengthen the quality of acute home care services.

The promotion of home medical care and ACAH enables patients and their families to receive professional care without the hassle of traveling back and forth to the hospital. Through the use of IoT monitoring systems, vital signs and oxygen levels are tracked, allowing case managers to grasp physiological changes of patients in real time via the care platform. Home nurses conduct regular home visits for physical assessment and medication administration, while physicians assess the patient's condition daily via video consultation or home visits. This not only reduces the burden on patients and families, but also helps maintain a familiar lifestyle and improve quality of life.

However, home-based acute medical care is still in its early stages. Challenges such as the limitations in the scope of conditions treated, allocation and utilization of medical and nursing manpower, and alignment with the insurance system remain to be overcome. In particular, nursing staff are the frontline pillars of elderly care. NCKU Hospital not only continues to cultivate geriatric nursing talent but also gradually expands its equipment such as portable ultrasound devices, mobile X-ray machines, and bedside diagnostic instruments to make telemedicine and geriatric nursing services more efficient and of higher quality.

Image / IoT Monitoring System

Image / ACAH Team Providing Home Care Services

3.2 Optimization of Pediatric Medical Care

3.2.1 Safeguarding Pregnant Women and Newborns

Designated Hospital for High-Risk Pregnancy

According to World Health Organization (WHO) data, approximately 810 women worldwide die each day from preventable pregnancy- and childbirth-related complications, and about 6,700 newborns die daily. In Taiwan, a nation facing declining birthrates and an aging population, “ensuring the safety of mothers and newborns” is one of the Hospital’s key goals.

NCKU Hospital has long served as a severe-level emergency responsibility hospital under the emergency medical capability grading system. It is also designated as a high-risk pregnancy responsibility hospital within the perinatal emergency medical network. Each year, deliveries at the Hospital account for approximately 6% of all births in Tainan City, with most of the maternity patients being high-risk pregnancies. Over the past five years, high-risk pregnancies have accounted for 64–73%, and emergency high-risk pregnancies for 5–7%.

The medical and nursing teams from the Department of Obstetrics and Gynecology – Maternal-Fetal Medicine Division – and the Department of Pediatrics – Neonatology Division – jointly convene regular perinatal team meetings to discuss and study medical treatment and care processes for high-risk pregnant women and newborns. Through more than ten years of tireless dedication, the team has become a reliable support for high-risk pregnant women and newborns (including premature infants), while also sharing its experience with other OB/GYN and pediatric medical institutions to collectively improve the quality of maternal and newborn care.

The Hospital possesses exceptional capability in promptly managing emergency high-risk pregnancies. Drawing on the experience of the trauma team, a “Postpartum Hemorrhage (PPH) Referral Protocol” has been established. Upon receiving referral notifications from other hospitals, the triage unit immediately activates the PPH group call, summoning personnel from the Department of Obstetrics and Gynecology, Emergency Department, Department of Anesthesiology, Blood Bank, Operating Room, Department of Medical Imaging, and ICU physicians or on-duty staff to the emergency department to prepare. This enables the immediate initiation of cross-disciplinary team responses to address the patient’s critical condition. Emergency physicians maintain the patient's vital signs, and an OB-GYN specialist begins treatment within 60 minutes of arrival. The Hospital is also capable of handling emergency high-risk pregnancies during nighttime and holidays, and can perform emergency deliveries and cesarean sections during nighttime hours.

In addition, with advances in medical technology, the Da Vinci Surgical System has been adopted by the Hospital’s Department of Obstetrics and Gynecology. This is particularly beneficial for surgeries involving deep pelvic anatomical structures. Paired with an advanced surgical platform and high-resolution imaging capabilities, the system offers superior stability and flexibility compared to traditional laparoscopy, enabling more precise and successful surgical outcomes.

Preterm Infant Intensive Care

The number of newborns in Taiwan has continued to decline annually; however, due to various factors such as advanced maternal age, the rate of preterm births has not decreased but rather increased. Over the past four years, the Department of Pediatrics' Division of Neonatology has cared for more than 700 preterm infants with birth weights under 2,500 grams, averaging 170–180 preterm births per year. Half of these babies weigh less than 1,500 grams and, due to immature organ systems, commonly experience complications such as respiratory distress, unstable body temperature, and fluid loss, thus requiring especially meticulous care.

Image / 351-Gram Palm-Sized Baby Safely Discharged

Through close cooperation between the Neonatal Intensive Care Unit (NICU) and delivery room nurses, the Hospital has improved the heating equipment on neonatal resuscitation tables, pre-warmed delivery kits, and optimized postnatal neonatal care procedures. These measures have effectively reduced the incidence of hypothermia within the first hour of life among preterm infants, earning recognition as a merit award in the 2017 National Medical Quality Award (NHQA) Thematic Improvement Elite Group. Furthermore, in 2021, the Hospital was recognized at the Taiwan Neonatal Healthcare Network Annual Conference for achieving the lowest mortality and morbidity rates among medical centers.

With advances in medical technology, the global threshold of viability for preterm infants has lowered to 22 weeks' gestation. In 2019, the Hospital successfully cared for a preterm infant born at 23 weeks' gestation with a birth weight of only 421 grams until discharge. In 2022, the Hospital again delivered a preterm infant born at 23 weeks weighing just 351 grams. After nearly 200 days of meticulous care by the obstetrics and pediatrics teams, the baby's weight increased tenfold to over 3,700 grams and was successfully discharged in early 2023. The child is now under continuous follow-up by NCKU Hospital's Preterm Infant Follow-Up Team until age five.

It is worth noting that feeding preterm infants with breast milk during the period from two weeks to two months after birth is crucial in preventing necrotizing enterocolitis, a dangerous and potentially fatal condition. However, not all mothers of preterm infants are able to produce enough breast milk after childbirth to feed their babies. Therefore, in 2017, with subsidies from the Health Promotion Administration of the Ministry of Health and Welfare, NCKU Hospital established Taiwan's second human milk bank—the Southern Human Milk Bank—taking on the responsibility of safeguarding the health of newborns(preterm infants) in southern and eastern Taiwan. To date, it has served thousands of recipients. In 2021, under the theme "The Deepest Love is Milk, as Precious as a Mother's Own," the milk bank received the SNQ National Quality Label from the Institute for Biotechnology and Medicine Industry in the Hospital Community Services category. Since 2022, it has continued to develop powdered human milk products from donated breast milk to support families who face difficulties in accessing frozen donor milk.

3.2.2 Pediatric Medical and Integrated Services

Pediatric Medical Research

The Department of Pediatrics was established in 1988 at the founding of the Hospital. It has continuously expanded in terms of personnel and equipment, and has earned recognition from various sectors in the areas of medical services, teaching internships, and academic research. The department collaborates with top international medical institutions in conducting medical research, focusing on in-depth understanding and investigation of pediatric diseases, and upholds the research mission of “ensuring favorable health outcomes and improving quality of life for children,” promoting close integration between clinical and basic research. Currently, the department has established multiple research teams, including the Neonatal Neurology Team, Genetic and Rare Disease Team, Asthma and Immunology Team, Enterovirus Team, Nephrology and Dialysis Team, Cancer and Bone Marrow Transplantation Team, Cardiac Catheterization and ECMO Team, Hepatobiliary and Gastrointestinal Endoscopy Team, and the Premature Infant Care Team.

Image / Pediatric Cardiac Catheterization and ECMO Team

There is a “ductus arteriosus” connecting the aorta and the pulmonary artery in a fetus. Normally, this duct closes spontaneously within 2 to 3 days after birth in full-term infants. If it remains open, it leads to a condition known as “patent ductus arteriosus” (PDA), which can cause pulmonary edema, pulmonary hemorrhage, heart failure, and even become life-threatening. The occurrence rate of PDA increases significantly in preterm infants with lower gestational age and birth weight, averaging as high as 30-40%.

“Minimally invasive catheter closure surgery” is a common interventional treatment for larger infants over 3 kilograms. However, it is highly challenging in extremely low birth weight preterm infants due to their extremely small blood vessels and susceptibility to hypothermia. Nonetheless, the pediatric team at NCKU Hospital is confident in managing various PDA-related respiratory symptoms. The team has successfully treated a preterm infant born at 26+3 weeks of gestation with a birth weight of 766 grams—after undergoing cardiac catheterization, the infant was able to be removed from the ventilator just two days post-surgery. Another case involved a male infant born at 22+4 weeks of gestation weighing only 462 grams, who also successfully underwent cardiac catheterization. This represents the lowest birth weight recorded in the literature for such a procedure.

The NCKU Hospital team has published four related papers in SCI journals. In addition to case reviews and experience sharing, the publications also include the use of a unique umbilical intervention for treating patent ductus arteriosus in preterm infants and a comparison of post-operative respiratory trajectories in preterm infants undergoing either catheterization or surgical ligation. In 2023, the team published a paper in the journal Pediatric Pulmonology of the American Thoracic Society, exploring the association between bronchopulmonary dysplasia at discharge and various treatment modalities. The team has also been invited multiple times to present at international conferences or online meetings and has collaborated and co-authored papers with world-leading teams to showcase Taiwan's achievements.

Child Development and Protection

Since 1997, the Hospital has been commissioned by the Department of Health, Executive Yuan, to serve as a model hospital for the "Child Developmental Joint Assessment Center." The Center targets high-risk infants and young children aged 0 to 6 years with developmental delays or suspected delays, identifying the type and extent of the delay, formulating individualized treatment goals, and referring them to appropriate institutions for treatment. For children undergoing treatment, the Center conducts regular follow-up assessments, supports other hospitals with specialized examinations, and assists children with developmental delays in returning to mainstream society, thereby fulfilling the medical service principle of "early detection, early intervention."

Image / Child and Adolescent Protection Symposium

In 2018, in response to the Executive Yuan's "Strengthening the Social Safety Net Program," the Hospital established the "Regional Medical Integration Center for Child and Adolescent Protection," actively collaborating with the Tainan City Government's Social Affairs Bureau, Domestic Violence Prevention Center, Taiwan Tainan District Court, and the District Prosecutors Office. In the event of serious child abuse cases, coordination meetings are convened to jointly discuss follow-up handling plans and assist in the identification and assessment of injuries in child and adolescent protection cases, as well as in the physical and psychological recovery of abused children and adolescents.

Each year, the Hospital organizes more than ten educational training sessions and seminars on related topics, extending cooperation to civil social welfare organizations and jointly holding the "4/28 Child Protection Day" advocacy event with the Taiwan Fund for Children and Families. The Hospital has also launched the "Home Visit Assessment Program for Children and Adolescents in Vulnerable Families," targeting families served by Tainan City Social Welfare Service Centers. Upon social worker assessment identifying children with multiple needs in the household, referrals are made to the Hospital's Child Protection Integration Center, which arranges for a medical team to conduct home visits. If any issues related to health, medical care, developmental delay, or caregiving are found, the team provides consultation and referral services, enabling early detection and intervention.

3.3 Regional Medical Safety Network

3.3.1 Integrated Diagnosis and Treatment of Occupational Injuries and Diseases

The Hospital established the “Special Outpatient Clinic for Occupational Diseases” under the Department of Internal Medicine as early as 1990. In 2008, in response to national policy and social welfare needs, and with the support of the Council of Labor Affairs, it founded the “Occupational Injury and Disease Diagnosis and Treatment Center.” In 2010, it was renamed the “Occupational Injury and Disease Prevention Center” to handle occupational injury and disease-related services for workers in southern Taiwan. The Center provides workplace health care services for enterprises in the region, assists them in establishing safe working environments to prevent occupational diseases, and offers occupational medical personnel support and training services to medical institutions in the area, aiming to enhance the Center’s regional integration function and role.

In addition, the Hospital’s Department of Occupational and Environmental Medicine partnered with the Department of Occupational Therapy, College of Medicine, National Cheng Kung University to form the “Workplace Work Reinforcement Team.” Since 2005, it has undertaken services commissioned by the Occupational Safety and Health Administration, Ministry of Labor, establishing the “Work Reinforcement Center” to provide occupationally injured workers with services such as work ability evaluation and training, occupational rehabilitation, on-site job analysis, job redesign, return-to-work programs, and workplace health promotion. In 2023, the Hospital was certified by the Ministry of Labor as Tainan City’s first hospital with dual specializations in “Occupational Injury and Disease Diagnosis and Treatment” and “Occupational Functional Rehabilitation.” Accordingly, the “Occupational Injury and Disease Prevention Center” was renamed the “Integrated Services Center for Occupational Injury and Disease Diagnosis and Treatment,” and the “Work Reinforcement Center” was renamed the “Professional Institution for Occupational Functional Rehabilitation,” offering occupationally injured workers high-quality and comprehensive care services.

The integrated service team of NCKU Hospital collaborates with the occupational injury service team of the Tainan City Government to accelerate the recovery of occupationally injured workers through multiple “support mechanisms,” including providing legal consultation, assisting workers in handling disputes with employers, and helping apply for functional rehabilitation subsidies. These efforts encourage injured workers to continue rehabilitation at the Hospital. Through interdisciplinary collaboration between the public and private sectors, the impact of occupational injuries on workers’ lives is effectively reduced. With joint efforts across professional fields, the program addresses the physical, psychological, and social needs of injured workers to achieve better rehabilitation and return-to-work outcomes.

Image / Unveiling Ceremony of the Dual-Specialty Hospital

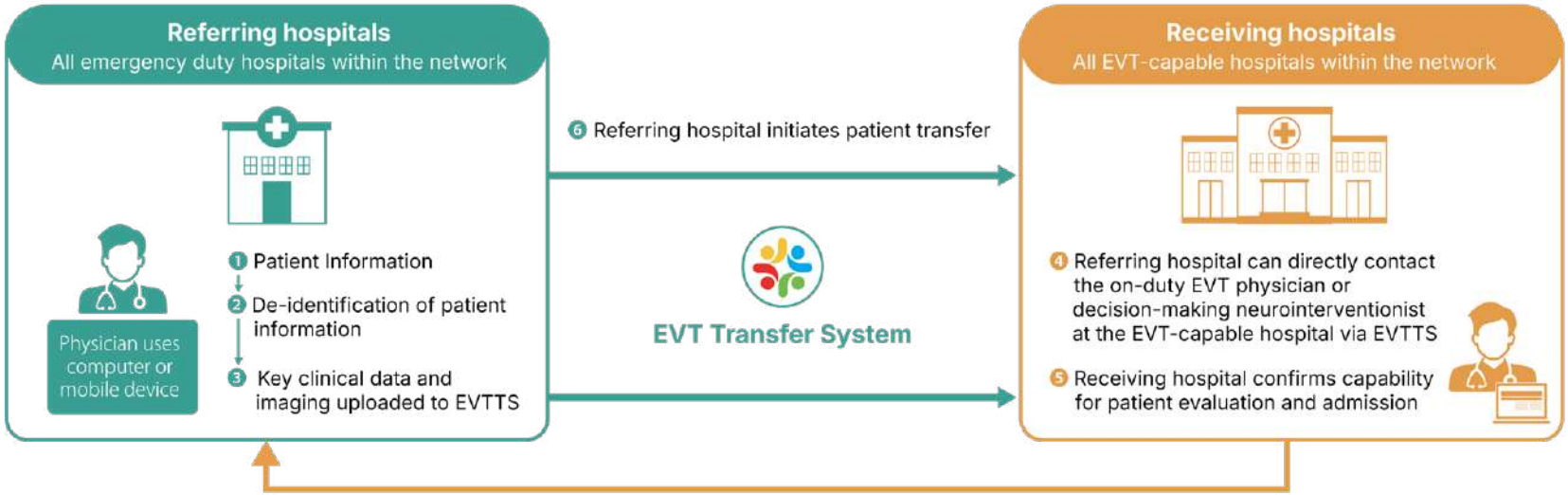
3.3.2 Greater Tainan Emergency Medical Services

EVT transferring system(EVTTS)

As the golden treatment window for acute ischemic stroke is only three hours, the speed of performing arterial thrombectomy or intravenous thrombolysis significantly affects patient outcomes. Since 2018, the Stroke Center of the Hospital has cooperated with the Tainan City Fire Department to provide frontline emergency personnel with a series of stroke education and training courses, establishing the “Tainan City Acute Stroke Assessment Emergency Medical System” to rapidly transport patients to hospitals capable of treating acute strokes.

Due to the limited number of physicians qualified for Endovascular Thrombectomy(EVT), not all critical care emergency hospitals offer this service. To further improve referral efficiency for acute stroke cases, the Stroke Center, in collaboration with the Institute of Biomedical Engineering of NCKU, developed the EVTTransfer System (EVTTS) in 2020 and partnered with the Tainan City Government to promote the “Acute Stroke Referral Quality Improvement Project.” The system officially launched in 2021, integrating the Fire Department and 13 emergency hospitals in Tainan City. It shortens inter-hospital referral communication time and reduces disability in acute stroke patients.

Regional Joint Defense Mechanism Structure



From its inception, the platform was developed to address the pain points of past referral processes, with the referring hospital's needs (referral requests) as the starting point for its design. Through continuous system optimization, it has achieved significant results and was recognized with the 2024 National Innovation Award and National Medical Quality Award(NHQA) commendation. As of 2024, a total of 19 hospitals in the Taichung and Yunlin-Chiayi-Tainan regions have joined the referral network. Statistics show that EVTTS has improved referral efficiency by an average of 77 minutes, increased the thrombectomy rate by 26%, shortened the time to thrombectomy by 128 minutes, and improved favorable outcomes for thrombectomy patients by 36.6%.

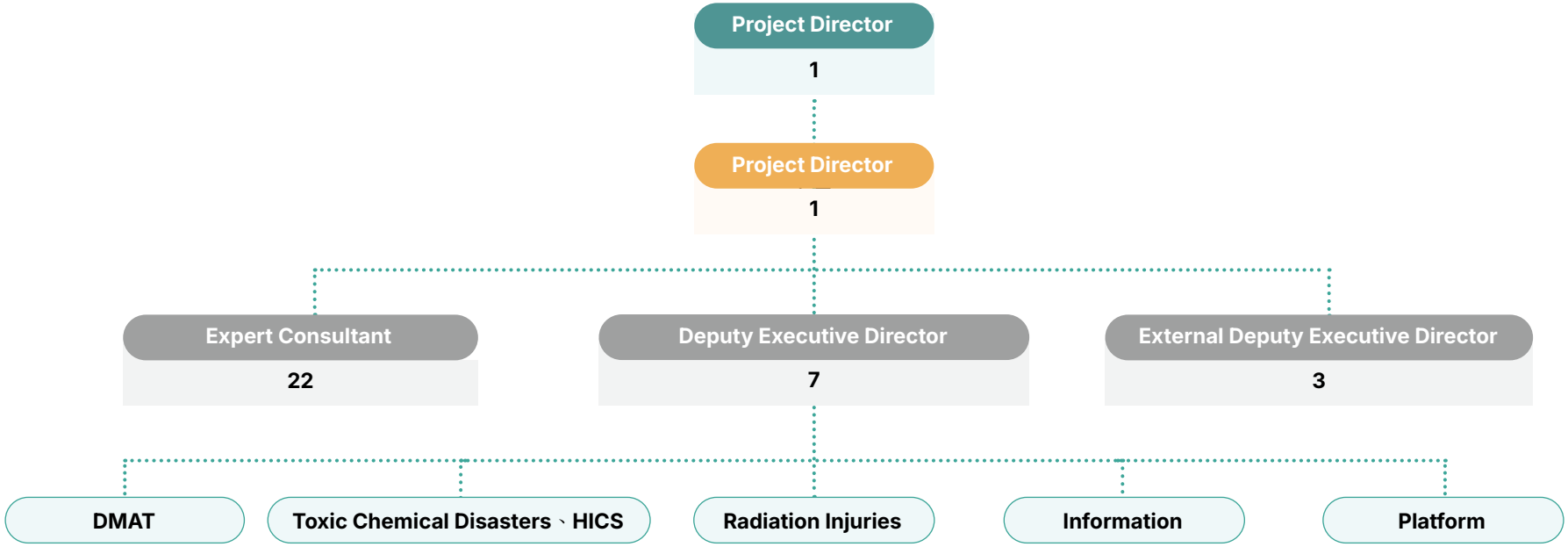
3.3.3 Disaster Emergency Medical Response

Southern REMOC

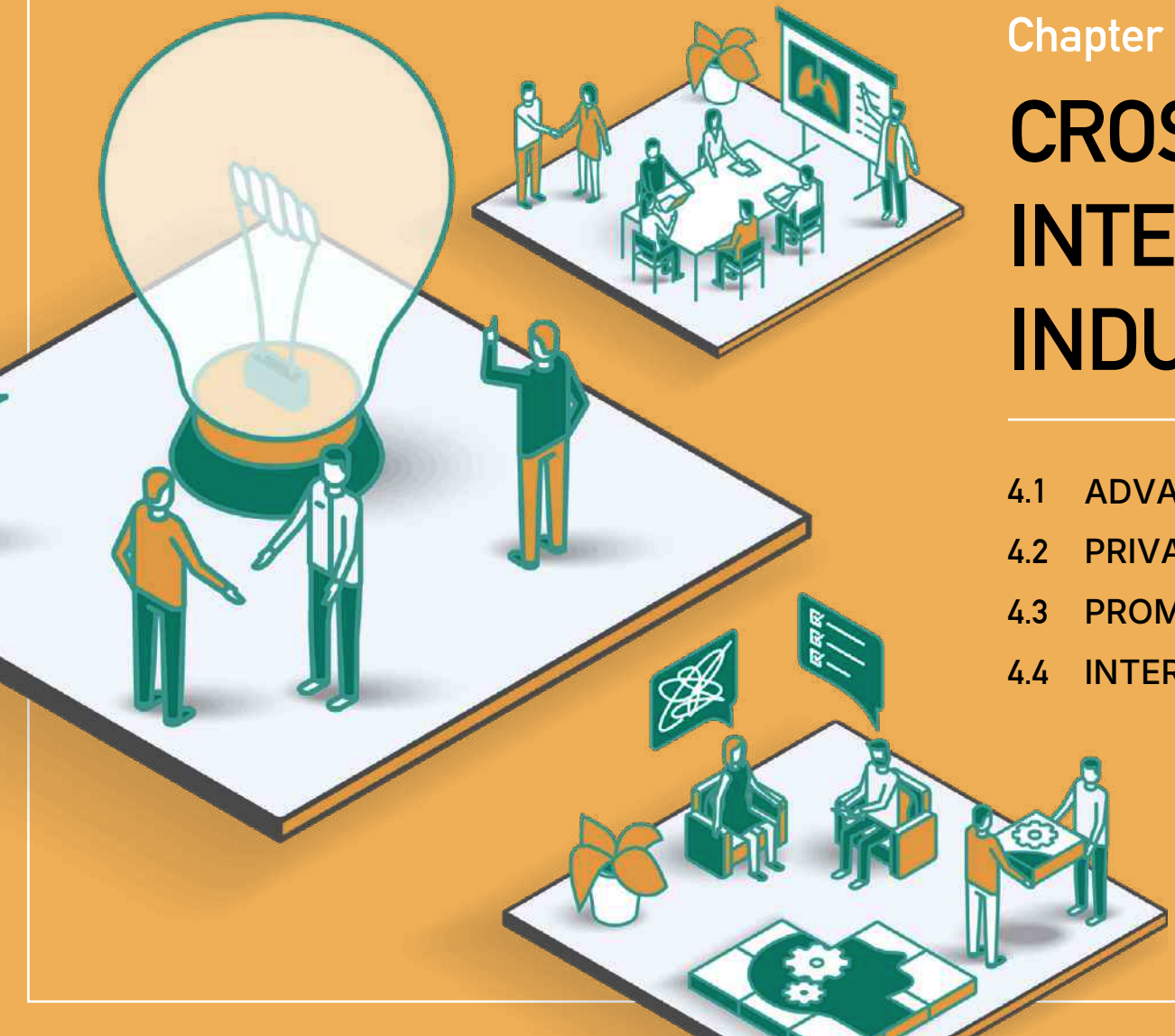
Following the experiences of the 921 Earthquake and the SARS outbreak, Taiwan recognized the importance of round-the-clock emergency medical response information and coordination, particularly in the event of large-scale disasters that require cooperation and assistance from neighboring counties and cities. In response, the Ministry of Health and Welfare established six regional Emergency Operations Centers (rEOCs) nationwide, integrating horizontal activation across neighboring counties' fire rescue services, health administrations, and emergency medical systems, while enhancing emergency medical response capabilities through vertical command coordination between central and local levels, with the aim of achieving effective medical rescue.

Due to its abundant and diverse cross-disciplinary resources, NCKU Hospital was commissioned by the Ministry of Health and Welfare in 2004 to establish the Southern EOC. In 2013, it was renamed the "Regional EMOC," abbreviated as REMOC. During regular periods, it monitors the operation of regional emergency medical services and the status of medical resources, maintains 24-hour surveillance of disaster incidents within its jurisdiction that may impact healthcare, monitors the regional medical capacity, and plans and conducts various emergency medical training programs and drills. During disaster emergencies, REMOC provides accurate and timely medical information to assist the Ministry of Health and Welfare and local health bureaus in carrying out emergency medical actions, promoting inter-agency communication and coordination, and strengthening the integration and quality of regional emergency medical responses.

Southern REMOC Organizational Structure



The Superintendent of the Hospital serves as the Project Director of the Southern REMOC program, while the Executive Director and Deputy Executive Director positions are held by physicians from the Emergency Department of NCKU Hospital. The additional Deputy Executive Director and expert consultants are appointed from emergency department heads of hospitals in the Yunlin-Chiayi-Tainan region to facilitate horizontal coordination and resource integration. A total of seven drills were conducted in 2024. Physicians from the Hospital have also been appointed as medical advisors, consultants, examiners, and committee members for various local governments and institutions, including serving as medical directors for the Tainan City Fire Department, medical consultants for the Taipei City Fire Department, and committee members for the Kaohsiung City Department of Health. Related specialists also participate in professional competency assessment workshops of the Taiwan Society of Emergency Medicine, hospital emergency disaster response drill evaluations, and continue to be involved in emergency medical consultation, review panels, and selection processes for trainees of various local government agencies and institutions.



4

Chapter

CROSS-DISCIPLINARY INTEGRATION AND INDUSTRIAL INNOVATION

4 Cross-Disciplinary Integration and Industrial Innovation

4.1 Advanced Medical Research

Material Topic	Advanced (Medical) Research	
Importance	◉ Advanced medical research holds critical significance for the Hospital. It not only integrates abundant clinical and basic research resources to promote the development of translational medicine but also drives innovative applications such as AI diagnosis and smart healthcare. These efforts enhance academic standing and international collaboration capacity, further facilitating the commercialization of medical technologies, policy formulation, and innovation in elderly care. At the same time, it brings together cross-disciplinary talents and resources to build a competitive medical research ecosystem.	
Influence and Impact	Positive / Actual / Social	Promotes innovation in the development of medical devices, healthcare materials, and new drugs; accelerates the development of the biotechnology and smart healthcare industries; and advances the commercialization and clinical application of medical technologies.
	Positive / Potential / Social	Inter-institutional and interdisciplinary research collaboration helps establish an integrated medical research platform and attracts and retains high-level research talent.
	Positive / Potential / Social	Research outcomes can serve as a basis for government policymaking in medical and health-related areas, such as epidemic forecasting, long-term care models, and National Health Insurance reform.
	Positive / Potential / Governance	Active participation in advanced research projects may lead to an increase in the output of high-quality publications, enhancing international academic influence and the Hospital's performance in research rankings.
	Negative / Potential / Governance	Advanced research requires significant investment in manpower, funding, and time, which may crowd out resources allocated to clinical care and basic operations.
	Negative / Potential / Governance	Clinical physicians must juggle both medical and research responsibilities, potentially leading to overwork, administrative burden, and increased pressure on career development.
	Negative / Potential / Governance	Advanced research is highly experimental and long-term in nature; it may not yield immediate results, leading to public skepticism regarding the value of such investments.
Policies	◉ Integrate resources from the College of Medicine and the University to enhance quality and research capacity. ◉ Collaborate with domestic and international institutions to establish industry–academia–research–medicine alliances.	

Material Topic	Advanced (Medical) Research
Strategies	◉ Join hands with MDIC to jointly build an ecosystem for frontier medical research. ◉ Collaborate with international academic institutions, related medical industry organizations, and global pharmaceutical companies to participate in multinational clinical trials and research publications. ◉ Work in concert with the Advanced Medical Device Technology Center to integrate clinical and research efforts in developing cutting-edge medical devices, smart healthcare, and elderly care solutions. ◉ Establish an ethics consultation committee and a mechanism for the participation of diverse interest representatives to ensure research compliance with ethical standards. ◉ Establish a fair research review system to ensure equitable resource allocation, taking into account both clinical departments and niche research topics. ◉ Activate a research risk response plan (e.g., suspension of clinical trials), and implement medical liability insurance and patient compensation mechanisms. ◉ Clarify incidents through public explanations and establish a transparent platform for research ethics, enabling the public to understand research procedures and protection measures.
Goals & Objectives	**Short-Term Goals (2025–2026)** ◉ Establish a dedicated team for frontier medical research, composed of members with backgrounds such as clinical physicians and research nurses. ◉ Build an industry-academia collaboration network with the university's main campus, medical technology startups, and science parks. ◉ Talent cultivation: Promote training programs on "Research Ethics," "Clinical Trials," and "AI-driven Healthcare Transformation." **Mid-Term Goals (2027-2030)** ◉ Improve research ethics and data governance mechanisms, strengthen IRB review processes, and implement AI data protection policies. ◉ Implement translational and practical application of outcomes by bringing research results into the evidence-based application stage. ◉ Apply for international research projects or clinical trials to enhance the visibility and quality of research publications. ◉ technology startups, and science parks. ◉ Talent cultivation: Promote training programs on "Research Ethics," "Clinical Trials," and "AI-driven Healthcare Transformation." **Long-Term Goals (Post-2030)** ◉ Develop representative research areas to build the brand of the medical center. ◉ Jointly establish R\&D bases with top domestic and international research institutions and related biotech companies to promote precision and smart healthcare systems. ◉ Promote industrialization through technology transfer and licensing to commercialize outcomes and drive healthcare transformation. ◉ Establish stable funding channels and a talent development system to build a sustainable research resource system. ◉ technology startups, and science parks. ◉ Talent cultivation: Promote training programs on "Research Ethics," "Clinical Trials," and "AI-driven Healthcare Transformation."

Material Topic	Advanced (Medical) Research
Management Evaluation Mechanism	◉ The Hospital's management team and oversight team hold joint meetings on a quarterly basis in principle to maintain close interaction and ensure alignment between the hospital's operational policies and the academic system's development direction.
Performance and Adjustment	◉ In 2024, there were 274 journal articles (including 20 first-time publications in international journals) and 126 academic conference paper applications. ◉ In 2024, the Hospital subsidized a total of 348 internal research projects and 214 external projects. ◉ In 2024, 12 research academic events were held. ◉ In 2024, the research teams received 2 National Innovation Awards, 3 National Innovation Progress Awards, and 8 patents granted, totaling 13 research awards and patents. ◉ In 2024, there were 50 interdisciplinary collaborative projects within the Hospital and 85 internationally co-authored research papers.

4.1.1 Clinical and Translational Medical Research

Academic and Clinical Resource Complementarity

As a teaching hospital, the Hospital places equal emphasis on research, education, and medical services. As the affiliated medical institution of the NCKU College of Medicine, it works in close collaboration with the College to jointly establish a comprehensive system for clinical and academic research, promoting the development of medical research in Taiwan and enhancing the level of medical technology. By leveraging the diverse and abundant clinical cases at the medical center and the multidisciplinary medical teams, and combining them with the research capabilities from the College in basic medical science, public health, pharmacy, biotechnology, and information technology, it accelerates the translation of basic theoretical research into practical application—realizing the translational medical goal of "identifying problems in the clinic, finding answers through research, and returning to the clinic to improve care."

Attending physicians in the Hospital with a research motivation may pursue a master's or doctoral degree at the Institute of Clinical Medicine of the College of Medicine, under the joint guidance of professors from the College and clinical mentors, thereby shaping academic talents with both clinical insight and research capabilities. Conversely, students and researchers from the College can leverage the clinical resources of NCKU Hospital for data collection, case analysis, and field validation. Through this two-way complementary mechanism, the Hospital has become a core hub for clinical research and academic innovation in southern Taiwan.

Clinical and Academic Resource Complementarity

To continuously develop translational medical research that focuses on solving clinical diseases or developing new treatments and extends to fundamental research, as well as to cultivate future research leaders from both the hospital and the medical school through a team-based approach, the Hospital has established a Clinical Research Talent Development Program. This program aims to discover and nurture outstanding clinical medical research talent, with senior researchers forming teams to lead young attending physicians in conducting research, thereby enhancing the Hospital's research competitiveness and improving research quality.

In addition, the Hospital has established the "Incentive Guidelines for Research Paper Publication" to encourage staff to conduct academic research and publish in international journals, thereby raising the standard of medical research at the Hospital. In 2024, a total of 274 journal articles were published (including 20 first-time publications in international journals), and 126 academic conference paper applications were submitted. As the topic of mega journals has drawn increasing attention in recent years, universities and the University's main campus have implemented related promotion guidelines and adopted stricter "substantive journal review" mechanisms. Excluding adjunct and National Health Research Institutes (NHRI) joint-appointed personnel, the Hospital recorded 89 papers in 2024 with an impact factor (IF) greater than 5 published by first authors, corresponding authors, or authors who are both.

2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
R1-3 Growth in the Number of Outstanding Papers (IF≥5 or Subject Area Ranking≥5%)	**The number of papers with IF≥5 or subject area ranking≥5% increased by 5 compared to 2023.**	In 2024, there were a total of 89 papers with IF>5, representing a decrease of 61 papers compared to 150 papers in 2023. This decline is attributed to the heightened attention on the issue of Mega Journals in 2024. In response, various universities and the University's main campus revised their promotion guidelines and adopted enhanced "substantive journal review" mechanisms. Accordingly, the Hospital also implemented a phased reduction of incentive amounts starting January 2024. Researchers, considering the above factors, may have opted to submit their manuscripts to journals with more rigorous review systems. Although these journals generally have slower publication processes, they offer greater assurance regarding the credibility of the research results.	×

Supporting In-Hospital Research

To integrate research-related software and hardware resources and enhance the quality and efficiency of clinical research, the Hospital has established a Clinical Medical Research Center and set up 14 core laboratories. It has employed 15 technicians and administrative staff and allocated an annual budget of NT$5 million for the maintenance of high-value instruments and NT$7.1 million for laboratory consumables to ensure the normal operation of core/shared laboratories.

In addition, a research consultation platform has been established, where senior professors from National Cheng Kung University, research-based attending physicians of the Hospital, and PhD-level researchers provide consulting services on paper writing and project planning. This platform supports hospital colleagues in research design, manuscript writing, and journal submission. Furthermore, training courses on academic writing and project proposal development are held to strengthen the Hospital's research capabilities.

The Clinical Medicine Research Center distributes a quarterly e-newsletter to introduce the Hospital's core facilities and research resources. It has also established an "Online Digital Learning Platform" and regularly holds equipment training courses to actively expand its user base, aiming to improve the utilization rate of equipment and increase research paper output. In 2024, a total of 39 equipment training and certification sessions were held. The number of in-hospital physicians and medical personnel using the core facilities reached 6,071, representing an 8.5% decrease compared to 2023. Upon review, the main reason for this decline was that the university's main campus shared-instrument laboratories have recently acquired newer models, while the research equipment in the Clinical Medicine Research Center consists largely of older-generation devices. As a corrective measure, a phased equipment replacement plan has been proposed and budgeted.

14 Core Laboratories

2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
R1-1 In-Hospital Project Budget Execution Rate	Annual budget execution rate reaches 90%	The annual project budget execution rate was 98.9%	O
R1-2 Growth Rate of Core Laboratory Facility Usage	Increase in usage rate of core facilities by in-hospital physicians and medical personnel by 5% (calculated based on number of usages)	The total number of usages by in-hospital physicians and medical personnel of core facilities was 6,071, showing a decrease of approximately 8.5%. The main reason is that the university's main campus shared-instrument laboratories have gradually acquired new equipment in recent years. Compared to the older-generation equipment currently in the Clinical Medicine Research Center, this has diverted usage from the Hospital's facilities. A phased equipment replacement plan has now been proposed and budgeted as a corrective measure.	X

4.1.2 Tri-Partite Collaboration among Academia, Research, and Medicine

Interdisciplinary Integrated Projects

In 2024, the Hospital subsidized a total of 348 in-hospital research projects. In addition to the traditional “individual research” model, and in order to “encourage senior researchers to mentor young researchers in actively engaging in clinical and translational medical research and to stimulate the Hospital’s research culture,” a budget of NT$122.9 million was allocated to support the in-hospital “Future Star Cultivation,” “Forward-Looking Integrated,” and “Non-Integrated” projects. These initiatives aim to nurture outstanding in-house teams and position integrated projects as pilot studies for future large-scale external grants. This also prepares for cross-hospital and cross-university integrated teams and encourages the Hospital’s physicians and medical personnel to identify problems from clinical practice and seek collaborative research solutions with faculty members from National Cheng Kung University’s basic medical sciences and other interdisciplinary teams, thereby cultivating national integrated project teams.

To develop internationally distinctive medical specialties and to secure high-level external research collaborations (such as those from the National Science and Technology Council and the National Health Research Institutes), the Hospital allocated NT$50 million for hospital-designated special research projects（Top-Down）. These projects aim to integrate research and clinical care, identify outstanding and impactful clinical studies, and pioneer new therapeutic fields. Meanwhile, the Hospital continues to appoint project review committee members and invites relevant experts to form an integrated project review panel responsible for supervising and evaluating the progress and future development potential of various projects. According to statistics, the Hospital had a total of 50 interdisciplinary collaborative in-hospital projects and co-published 85 research papers with international partners in 2024.

2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
R1-6 Promotion of Interdisciplinary and International Research Collaborations	❶ A minimum of 5 interdisciplinary collaboration projects across the Hospital ❷ A minimum of 5 international collaboration projects across the Hospital	❶ In terms of in-hospital interdisciplinary collaborations: A total of 3 Forward-Looking Integrated Projects and 47 Special Projects on Smart Healthcare Interdisciplinary Collaboration (jointly conducted with National Cheng Kung University) were approved throughout the year. ❷ In terms of international collaborations: Hospital personnel (including adjunct medical researchers) co-published 85 research papers with international research teams (including 49 as first or corresponding author and 36 as co-authors).	○

Establishing an Intercollegiate Biotechnology Research Network

The Hospital actively integrates the academic research capacity of various colleges at National Cheng Kung University to conduct collaborative research projects across colleges and departments, fostering innovative research outcomes. The Clinical Research Center also assists research teams in participating in external competitions or applying for patents. In 2024, a total of 8 patents were granted, 2 teams received the 21st National Innovation Award, and 3 teams received the 2024 National Innovation Progress Award.

To stimulate internal momentum for innovative research, the Clinical Research Center regularly organizes innovation research activities in hopes of forming more interdisciplinary research teams, thereby achieving goals related to industry-academia collaboration and patent application. In addition, the Hospital continues to collaborate with external organizations, leveraging the resources of inter-institutional teams to enhance the quality and standing of its clinical medical research and contribute to the improvement of national healthcare quality. In 2024, the Hospital received a total of 156 grants from the National Science and Technology Council (including multi-year projects), 6 projects from the National Health Research Institutes, 26 projects from the Ministry of Health and Welfare and affiliated agencies, 12 collaborative projects with other hospitals, and 14 projects from other institutions. Additionally, the Hospital held 11 academic lectures and 4 symposiums to elevate the level of research.

2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
R1-4 Number of Approved External Projects	❶ Establish at least 6 integrated teams ❷ Hold at least 5 academic activities on innovative research ❸ Obtain at least 200 external projects	❶ The Hospital has a total of 17 integrated team projects ❷ Held 12 academic research activities ❸ Obtained 214 external projects	O
R1-5 Number of External Research Awards or Patents	At least 7 research awards and patents	The Hospital's research teams received 2 National Innovation Awards, 3 National Innovation Progress Awards, and 8 granted patents, totaling 13 research awards and patents.	O
R2-1 Advancement of Innovative and Cutting-edge Medical Research Capacity	❶ Hold at least 6 courses and medium-to-large seminars throughout the year ❷ Have at least 5 in-hospital research projects related to cell therapy, precision medicine, big health data, or smart medicine.	❶ Held 8 courses related to precision medicine and smart medicine ❷ A total of 12 in-hospital projects related to cell therapy, precision medicine, and smart medicine were approved	O

4.2 Privacy Protection

4.2.1 Medical Information Security

Medical Information Architecture

The Hospital's information systems are divided into three main sections: clinical care, hospital management, and teaching and research. Both the clinical care and hospital management systems are equipped with dual server rooms, dual mainframes, and dual-loop connections. Additionally, the outpatient system includes a standalone version for use in case of system failure. All in-hospital data are stored in a private cloud, which serves the needs of all hospital staff and the management team.

In the past, due to the immense and complex nature of the Hospital's information systems—with hundreds of functional subsystems directly or indirectly interconnected—maintenance was difficult and interdependencies often posed barriers to integration with external organizations. In response to evolving trends, the Hospital's Information Technology Office undertook a system reengineering project from 2009 to 2013. During this period, a microservices architecture was gradually implemented, breaking down the system into independent functional modules. This transformation significantly enhanced the system's availability and scalability, enabling development, updates, or the addition of specific cybersecurity mechanisms for different tasks without affecting the overall system or other functions.

Three Major Information Systems of NCKU Hospital

Clinical Care

Outpatient, emergency, and inpatient systems、CIS and PACS imaging systems、Family tree and e-signature systems、Surgery, infection control, and blood bank systems、Medical records and health insurance claim systems、Pharmacy and lab systems

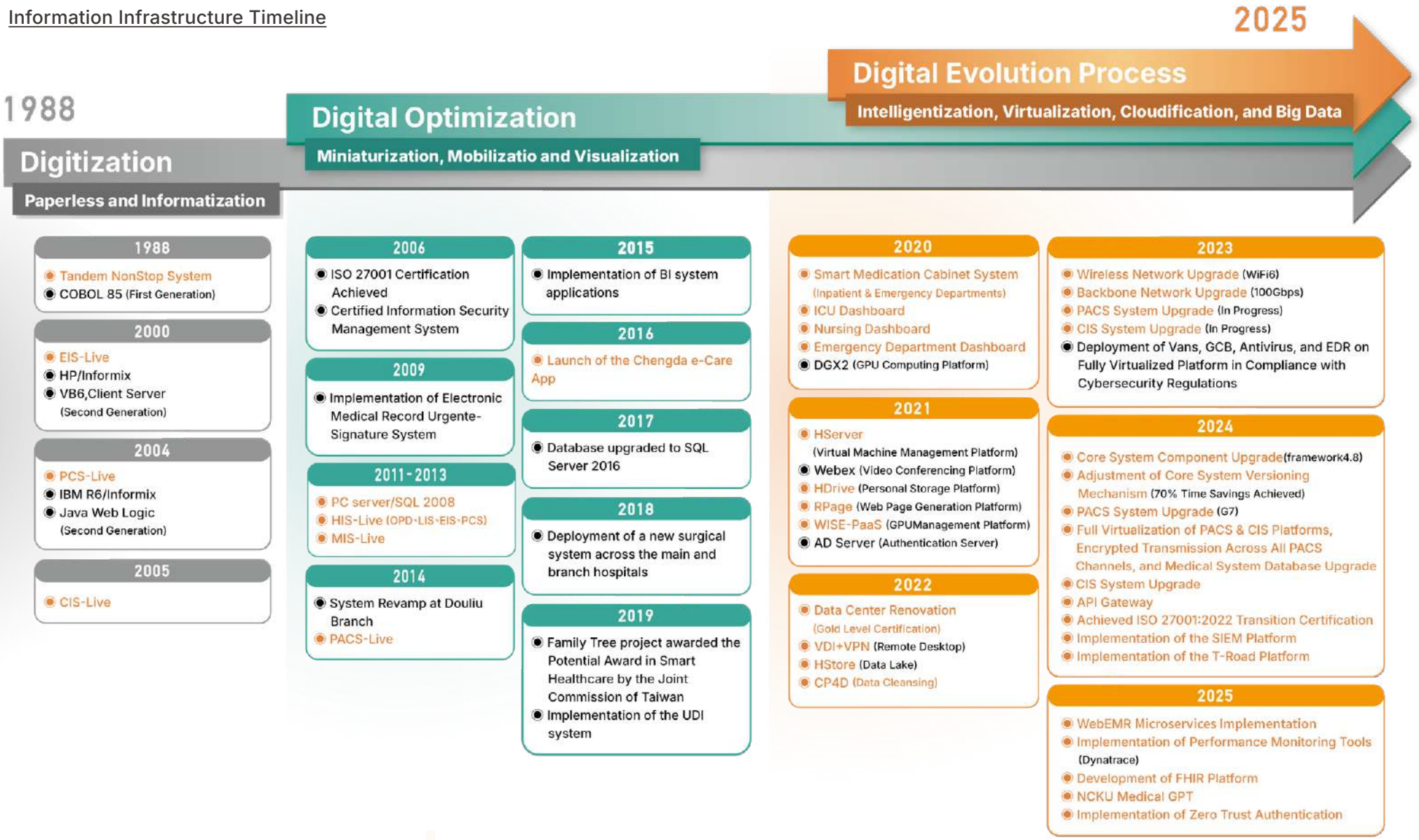
Hospital Management

HR and document system、Finance, inventory, and performance systems、Social work, quality, and duty systems、Knowledge management and decision support systems

Education and Research

Digital learning system、Research proposal review system、Journal Article Publication Management System、IBM and CP4D research databases

Information Infrastructure Timeline



Currently, NCKU Hospital has upgraded most of its non-core subsystems to a microservices architecture and continues to develop related information integration services with external institutions, enabling real-time transmission and sharing of information. The Hospital is also in the process of reconstructing its core internal systems using microservices. Following the virtualization of the PACS Picture Archiving and Communication System and CIS（Clinical Information System）, this is expected to further enhance the flexibility of deployment, maintenance, expansion, and management of each functional module, while accelerating heterogeneous integration and application across systems.

Cross-Hospital Information Integration Services			
Referral Institution Dedicated System	Inter-Institution Examination Transfer System	Electronic Medical Record Exchange	Health Information Reporting Platform
National Immunization Information Management System		Chronic Prescription Delivery	Automated Fax Ordering System
CDC Epidemic Prevention Cloud (Automated Laboratory Infectious Disease Reporting, Electronic Medical Record Infectious Disease Reporting)			
NHIA Real-Time Patient Medical Information Inquiry (Lab and Imaging Reports, Discharge Summaries, and Artificial Joint Implant Data, etc.)			

Cybersecurity Joint Defense Mechanism

As one of the critical infrastructures in the medical field, NCKU Hospital has been designated by the Executive Yuan National Security Office as an A-level agency in information and communication security responsibility. The Hospital has established various operational protocols and annually appoints consultants for guidance, thereby enhancing the information security maintenance plan and reporting implementation status to the Executive Yuan's performance assessment system each year. Since 2016, the Hospital has passed ISO 27001 information security certification and has gradually expanded the certification scope to include HIS (outpatient, emergency, inpatient, and laboratory), the PACS system, electronic medical records, and the NHI medical information cloud inquiry system. Recertification is conducted every three years, with annual reviews, and the Hospital completed the ISO 27001:2022 transition certification in 2024.

Image / NCKU Hospital and the Tainan City Investigation Office of the Ministry of Justice Investigation Bureau Jointly Signed a Memorandum of Cooperation

By joining the Health-Information Sharing and Analysis Center (H-ISAC) for the healthcare sector, the Hospital shares cybersecurity intelligence with peer institutions, promotes relevant policies internally in a timely manner, and enhances staff awareness of cybersecurity efforts. The Hospital also commissions a top-rated cybersecurity firm to establish a Security Operations Center (SOC) to monitor the Hospital's cybersecurity status and transmit incident data in real time to the Ministry of Health and Welfare's H-SOC platform and the National Security Operation Center (N-SOC) platform to prevent cybersecurity incidents.

ned the "Memorandum of Cooperation on National Cybersecurity Joint Defense and Intelligence Sharing" and the "Security Protection Support Agreement" with the Tainan City Investigation Office. This established a "Regional Joint Defense" mechanism, elevating cybersecurity protection to a national security level. The Hospital can leverage the Ministry of Justice Investigation Bureau's intelligence on early warnings of security threats to guard against malicious cybersecurity threats and hacker attacks. In the event of man-made, natural, or accidental incidents, the Hospital can also promptly receive support from the Investigation Office for emergency response and joint defense, helping NCKU Hospital protect its cybersecurity and maintain the normal operation and sustainable development of its medical services.

4.3 Promoting Smart Healthcare

Material Topic	Promoting Smart Healthcare
Importance	◉ In response to social trends and policy directions, smart healthcare utilizes digitalization, automation, and AI technology to optimize processes, enhance medical quality and efficiency, assist hospitals in more effectively managing medical resources, reduce operational costs, and promote medical innovation and research. It also alleviates the burden on medical personnel, strengthens talent attraction and retention, and meets society's expectations for high-quality and efficient medical services.
Influence and Impact	Positive / Practical / Governance: Accurate diagnosis and treatment enhance patient safety, optimize patient service experience, reduce the burden on medical personnel, improve the accessibility of medical services, and achieve the sustainability of medical resources. Positive / Practical / Governance: Smart scheduling, pharmaceutical management, and ward management systems can improve operational efficiency, reduce manpower waste, and optimize the use of medical resources. Positive / Practical / Governance: Digitalized data can be used for medical research, promoting precision medicine, big data analysis, and disease pattern modeling, thereby strengthening the research foundation. Positive / Potential / Governance: Smart healthcare symbolizes the application of forward-looking technology, which helps enhance the hospital's innovative image and international visibility, attracting talents and external collaborations. Negative / Potential / Governance: Concerns regarding data privacy and security, issues of digital divide and fairness, challenges in technology integration and compatibility, the need for skill enhancement among healthcare professionals, challenges to traditional medical models, and ethical and legal issues. Negative / Potential / Governance: Advanced information systems and equipment require substantial initial investment, and long-term expenditures are also needed for maintenance, upgrades, and cybersecurity protection. Negative / Potential / Society: Healthcare personnel need to learn new system operations, and in the short term, workflow adjustments may increase workload and stress, potentially even causing resistance
Policies	◉ Promote innovative and cutting-edge medical research capacity; develop novel medical care, diagnostic, and treatment technologies.
Strategies	◉ Establish cloud platforms, data centers, etc., to lay the foundation for the development of smart healthcare. ◉ Collaborate with information technology and medical technology companies to introduce advanced technologies and solutions, promoting interdisciplinary cooperation. ◉ Promote AI applications in healthcare, including image recognition, disease diagnosis, and precision medicine development. ◉ Provide relevant training and workshops to equip healthcare professionals with the ability to utilize AI technologies. ◉ Develop user-friendly apps and platforms to encourage patient engagement in health management. ◉ Establish comprehensive data security and privacy mechanisms to ensure the safety and privacy of patient data.

Material Topic	Promoting Smart Healthcare

Goals & Objectives

Short-Term Goals (2025–2026)	Mid-Term Goals (2027-2030)	Long-Term Goals (Post-2030)
◉ stablish a dedicated team for forward-looking medical research, with members including clinical physicians, research nurses, and biomedical researchers.	◉ Achieved the NHQA “Institution-wide Smart Hospital Certification.”	◉ Continue to obtain the NHQA National Healthcare Quality Award“Institution-wide Smart Hospital Certification.”
◉ Establish industry-academia collaboration networks with the university’s main campus, biotech companies, medical technology startups, and science parks.	◉ Certified with HIMSS Stage 6.	◉ Certified with HIMSS Stage 7.
◉ Talent cultivation: promote training programs such as “Research Ethics,” “Clinical Trials,” and “AI in Transforming Healthcare.”	◉ Recognized by international media for smart healthcare achievements, affirming NCKU Hospital as a benchmark smart hospital.	◉ Ranked in Newsweek’s “World's Best Smart Hospitals.”
◉ Participate in domestic and international smart healthcare exhibitions.	◉ Promote data standardization and interoperability to facilitate the integration and circulation of various medical and health data, enhancing information integration efficiency.	◉ Introduce artificial intelligence to promote wall-less health care, aiming to realize a wall-less hospital.
◉ Host smart healthcare achievement presentations and exchange seminars to promote the knowledge and applications of smart healthcare and foster industry cooperation and exchange.		
◉ Refine regulations and technical standards related to smart healthcare, continuously optimize the management framework, and accelerate the clinical application of medical research		

Management Evaluation Mechanism

◉ Departments receive guidance for participating in certification and are provided with generous incentives to motivate teams.
◉ External evaluation mechanisms/international accreditation.
◉ Recipient of the National Innovation Award.
◉ Recipient of the NHQA National Healthcare Quality Award.

Performance and Adjustment

◉ Selected by international media as one of the World's Best Smart Hospitals in 2025.
◉ Participated in four domestic and international smart healthcare exchange events in 2024 to showcase NCKU Hospital’s smart healthcare research and development achievements.

4.3.1 Clinical Innovation and R&D

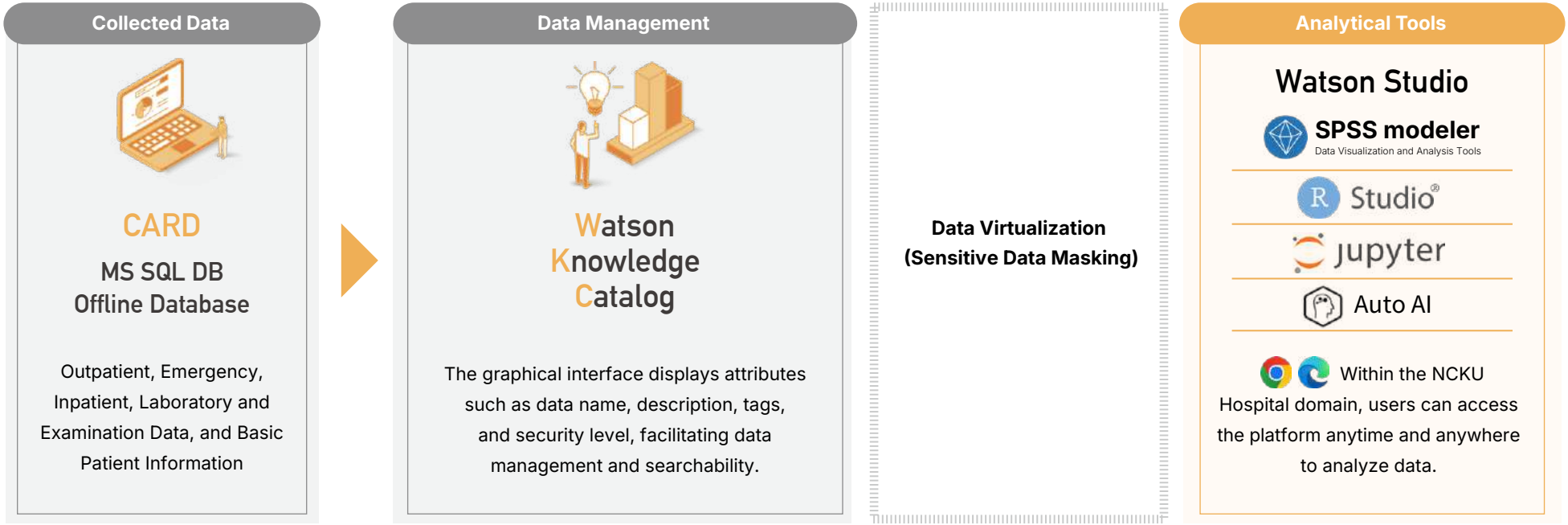
Creating New Value from Medical Data

The medical record data integration platform established by NCKU Hospital promotes medical research innovation with electronic medical records as the core. It integrates over 10 years of large-scale medical data, covering outpatient, emergency, inpatient, laboratory, and medical equipment data, and incorporates death registry data from the Ministry of Health and Welfare for comprehensive cause-of-death survival analysis. Utilizing cloud computing and data virtualization technology, researchers can directly analyze de-identified data within a secure in-hospital environment. The platform has been widely applied to clinical research on diabetes, kidney disease, and geriatric frailty, resulting in numerous academic achievements. In the future, it will promote cross-hospital and international collaboration, becoming an essential tool for clinical decision-making and healthcare economic evaluation.

2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
R2-1 Promoting Research Capacity in Cell Therapy, Precision Medicine, Big Health Data, or Smart Healthcare	❶ Conduct precision medicine and smart healthcare-related courses ❷ Provide digital learning courses ❸ Proactively support the implementation of in-hospital precision medicine and smart healthcare projects	❶ Held 8 CARD workshops ❷ Recorded and uploaded instructional videos for the CARD workshops ❸ Counseling outcomes: published 3 conference papers and 2 research reports	O

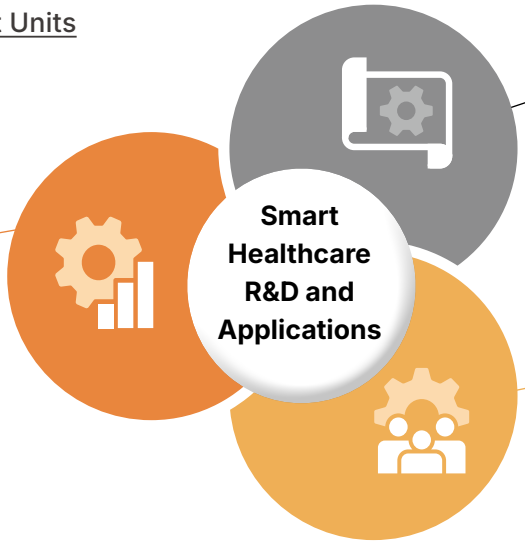
CARD Process Diagram



Joint On-Campus Research and Development

NCKU Hospital actively promotes exchanges and collaborations among industry, academia, research, and medicine. By integrating cross-disciplinary resources, the Hospital drives the development of innovative technologies and knowledge in medical technology, jointly researching and developing technologies and products with clinical value. Through cross-disciplinary innovation collaboration among industry, academia, and medicine based on clinical pain points, the Hospital leverages value-added development of medical data to develop smart technology solutions, thereby facilitating the application and commercialization of innovative smart healthcare R&D. The Hospital has established a smart healthcare industry-academia-research-medical collaboration liaison to provide services such as technical consultation, collaboration matchmaking, and agreement signing, thereby promoting the application and commercialization of innovative R&D.

Positioning of Medical Device Development Support Units



National Cheng Kung University

Future technology research
Support for startup teams
Explore business models
Support for medical device regulations

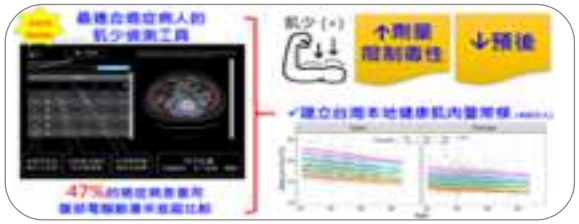
National Cheng Kung University Hospital

Find clinical needs
Expert knowledge and experience
Clinical data analysis
Feedback from application tests

Industry partners

Integrate various technologies
Product design and testing
Verify business models
Plan marketing strategies

The "Abdominal CT Body Composition Quantification System" software, developed by the team led by Associate Professor/Physician Tsai Yi-Shan of the Clinical Innovation Research and Development Center of National Cheng Kung University and NCKU Hospital, can assist physicians within seconds in tracking patients' muscle mass, muscle density, and fat composition, thereby facilitating the formulation of more personalized treatment plans. This software obtained certification from the Ministry of Health and Welfare's Food and Drug Administration in 2023, making National Cheng Kung University the first academic institution to receive a "Class II Medical Device License" and leading to the establishment of the spinoff company "Mega Radiance Co., LTD."



Image/ Abdominal CT Body Composition Quantification System

The "Virtual Reality Mirror Therapy System" originated from the original concept of Professor Hsu Hsiu-Yun of the Occupational Therapy Section, Department of Rehabilitation at NCKU Hospital. It was co-developed with Associate Professor Lin Che-Wei of the Department of Biomedical Engineering at NCKU and supported by several national scientific research and entrepreneurship programs as well as Ministry of Education talent development programs. In 2024, the system obtained U.S. FDA Class II medical device registration and is now available for prescription use by physicians in the United States. Efforts are underway to secure Taiwan's Ministry of Health and Welfare medical device certification, with the aim of applying the system in Taiwan's rehabilitation settings to provide effective rehabilitation therapy for more stroke and hemiplegic patients.

Image/ Virtual Reality Mirror Therapy System

4.3.2 Medical Technology Achievements Showcase

Hosted by the Institute for Biotechnology and Medicine Industry (IBMI), the Taiwan Healthcare+ Expo has, since its inception in 2017, rapidly become the most representative integrated exhibition for medical technology and the biotechnology industry in Asia, with cross-ministerial support from the National Science and Technology Council, Ministry of Health and Welfare, Ministry of Economic Affairs, and Ministry of Agriculture. It facilitates business exchanges and international cooperation in the healthcare industry. Exhibitors include well-known domestic and international medical institutions, technology companies, biotech firms, universities, and research institutions, attracting over 100,000 visitors annually.

Image / NCKU Hospital Participated in the 2024 Taiwan Healthcare+ Expo

As one of the largest academic medical centers in southern Taiwan, NCKU Hospital has been a regular exhibitor since the expo's inception. Each year, it showcases pioneering R&D achievements in smart healthcare, data integration, and innovative applications. These exhibitions help attract industry partners for clinical validation collaborations, expand application fields for innovative technologies, and promote dialogue and exchange with other medical centers, government agencies, and international entities, thereby deepening the Hospital's influence on national healthcare policies and research collaboration.

In response to the 2024 Taiwan Healthcare+ Expo's three main themes—"Medtech," "Biotech," and "Healthtech"—the Hospital brought together 12 outstanding teams from the College of Medicine and the University's main campus to participate. Centered on smart healthcare, the exhibition showcased NCKU Hospital's comprehensive integration of artificial intelligence and innovative medical devices, spanning from prevention and diagnosis to treatment.

2024 Exhibition Items		
Type	**Item**	**Description**
Smart Monitoring and Care Systems	"Guardian Angel" Heart Disease Diagnosis System	Developed by Distinguished Professor Shun-Yu Lee's team from the Department of Electrical Engineering, NCKU. Through wearable sensors and audio monitors on a wireless intelligent platform, along with physiological monitoring devices and AI recognition, this system instantly displays heart health status and addresses the challenges of manpower shortages and lack of preventive alerts in healthcare.
	Smart Dynamic Cardiac Function Assessment and Sudden Cardiac Arrest Prevention System	A collaboration between NCKU's Center for Industry-Academia Innovation and Cardio Metrics CEO Wen-Yen Chang. The system integrates AI technology to provide users with real-time heart health alerts.
	"Smart Grip Ring"	Developed by Nurse Yue-Ru Liao's team from the NCKU Hospital Nursing Department, this innovative assistive device is designed for dialysis patients to ensure proper grip exercise execution, effectively prolonging the lifespan of arteriovenous fistulas.
	"Nurse's Best Helper"	Developed by Director Li-Chuan Hung's team from the Nursing Department of Douliu Branch, the system uses wireless transmission to remotely monitor physiological data such as respiration, heartbeat, activity, and sleep. It combines smart analysis to send alerts, significantly enhancing care efficiency.
Smart Medical Diagnosis Platforms	"ALOVAS" AI Pathology Image Annotation and Analysis Platform	Developed by Dean Pao-Chu Chan's team from NCKU College of Electrical Engineering and Computer Science, the platform assists physicians in analyzing pathology images based on cellular features and tissue structures, reducing the workload of medical professionals.
	"Searching Thousands of Times, AI Already Pinpoints the Bile Duct Stone" AI-assisted System	Developed by Dr. Meng-Ying Lin's team from the Department of Internal Medicine, NCKU Hospital, this AI imaging system reduces physicians' burden of reviewing numerous images, improves medical efficiency, and lowers misdiagnosis risk.
	"Using AI to Assist in the Collection and Analysis of Emotional Symptoms"	Developed by Associate Professor and Attending Physician Huai-Hsuan Tseng's team from NCKU's Institute of Behavioral Medicine / Psychiatry Department, the system integrates multilingual AI robots to assist in collecting depressive symptoms, identifying facial and vocal emotions, and provides personalized depression indices and potential influencing factors to support effective evaluation and follow-up treatment plans for better mental health care.

2024 Exhibition Items		
Type	**Item**	**Description**
Precision Medical Innovation	"Polymeric Nanoparticle RTK Inhibitors Targeting KRAS-G12C Mutant Lung Cancer"	Developed by Director Wen-Bin Su's team from the Clinical Medical Research Center of NCKU Hospital, this nanomedicine requires only one-tenth the original dosage to effectively treat KRAS-G12C mutated LLC lung cancer in mouse models, offering new hope for patients with this mutation.
	"NCKU Hospital's Next-generation Surgical System and Care"	Developed by Dr. Yu-Ning Chen's team from the Department of Surgery, NCKU Hospital, the system integrates advanced imaging equipment, preoperative VR, naked-eye 3D imaging, and 3D-printed surgical simulation to enhance surgical safety and precision.
Smart Management Systems	"Real-Time Positioning System, Just One Click at Point E!" (RTLS)	A collaboration between Head Nurse Su-Jung Chang's team from Ward 4A, Department of Obstetrics and Gynecology, and BiDaE Technology, achieving one-click shift handover in medical settings. It eliminates the need to search the entire ward, reducing nurse shift handover time and workload.
	"Cross-device Inventory System to Enhance Pharmacy Inventory Operations"	Developed by Pharmacist Tsung-Yu Wu's team from the NCKU Hospital Pharmacy Department, the system proactively presents inventory information and dynamic dashboards for managers, replacing manual transcription processes and revolutionizing the pharmacy inventory workflow.
Critical and Emergency Care Platform	"Inter-hospital Acute Stroke Referral Platform"	Developed by Dr. Pi-Shan Sung's team from the Department of Neurology, NCKU Hospital. The platform effectively connects the acute stroke treatment network, enabling hospitals to administer intravenous thrombolysis during the golden hour, significantly improving referral efficiency, thrombectomy execution rate, and patient outcomes.

4.4 International Exchange

4.4.1 Cooperation with the New Southbound Policy

In response to the government's New Southbound Policy, the Ministry of Health and Welfare has launched the "One Country, One Center" initiative since June 2018, designating medical centers with international cooperation experience and strong medical capabilities as the healthcare cooperation hubs for each New Southbound country. This initiative aims to strengthen connections and exchanges in medical care, public health, and the biomedical industry with Southeast Asian and South Asian countries, fostering more systematic and sustainable bilateral cooperation.

NCKU Hospital was designated by the Ministry of Health and Welfare as the medical center responsible for India under the "One Country, One Center" initiative due to its established foundation of cooperation with India. The Hospital demonstrated high efficiency after the launch of the initiative—signing a memorandum of understanding (MOU) with CHD Group in September 2018, a public health and community health development organization in southern India. In the same month, it signed MOUs with Voice of Healthcare and Swan Hospital in India to introduce Taiwan's local medical and biotech industries into the Indian healthcare market and to provide opportunities for Indian medical personnel to undergo exchange training at NCKU Hospital. In November 2019, NCKU Hospital also signed an MOU with AIIMS, India's most representative national medical research institution, to cooperate in medical education and industry-academia research talent exchange.

2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
S2-1 Number of International Cooperation Activities Conducted	❶ Execute international cooperation and exchange programs, with at least 2 contract signings ❷ Hold at least 1 international symposium ❸ Provide training in Taiwan for at least 10 foreign medical-related personnel	❶ A total of 2 contract signings completed ❷ Two international symposium-related exchange programs held ❸ Number of foreign personnel trained in Taiwan： 20	O

The global pandemic has heightened awareness of the importance of digital technology in epidemic prevention and the development of telemedicine. During this period, NCKU Hospital's medical exchange and epidemic prevention support with India remained uninterrupted. In 2022, the Hospital co-hosted the "International Conference on Digital Health" with Voice of Healthcare, marking the first time a vice-presidential-level official from Taiwan participated in such an event. In 2023, the Hospital further signed an MOU with Yashoda Super Specialty Hospitals in India. In addition to personnel training, bilateral visits, and clinical research projects, the collaboration expanded to explore business opportunities in medical devices, aiming to leverage Taiwan's strength in hardware and India's strength in software to fully realize the potential and advantages of Taiwan–India cooperation, benefiting the people of both countries.

In recent years, NCKU Hospital has continued to build more connections with the Indian medical community. As of 2023, a total of 49 Indian physicians has been trained by the Hospital. It has also led other domestic medical device manufacturers to participate in trade exhibitions, thereby increasing Taiwan's visibility. In 2024, the Hospital participated in a webinar organized by "The Red Lantern Analytica," an Indian international affairs think tank. The webinar focused on Taiwan, and all participants expressed support for Taiwan's participation in the World Health Assembly (WHA) as an observer, recognizing Taiwan's contribution to global public health.

5

Chapter

CULTIVATING EDUCATION AND TALENT TRAINING

5 Cultivating Education and Talent Training

Upholding the service mission of "providing clinical teaching internships, promoting medical research and development, offering comprehensive medical services, assisting the development of regional medical institutions, and organizing continuing education for various healthcare personnel," the Hospital cultivates medical talent to meet the needs of southern Taiwan through offering internship opportunities and conducting relevant training programs for medical personnel in the southern region.

5.1 Cultivating Medical and Nursing Talents

Material Topic	Talent Development
Importance	◉ NCKU Hospital regards talent as the core resource for sustainable development. Through systematic education, training, and professional development, the Hospital enhances employees' professional capabilities and organizational competitiveness to ensure medical quality, patient safety, and care efficiency. With the advancement of medical technology and the increasing complexity of diseases, the Hospital has designed diverse career development and advanced training pathways for medical, nursing, and administrative personnel to cultivate holistic healthcare professionals with clinical expertise, humanistic care, teamwork, and teaching capabilities.
Influence and Impact	Positive / Actual / Governance: Foster a positive organizational culture to strengthen employees' identification with the Hospital's values and compliance behavior. Positive / Actual / Social: Promote evidence-based medicine and innovative applications to drive organizational transformation and teaching outcomes, while enhancing clinical skills and communication abilities to reduce medical risks and occupational injuries. Positive / Actual / Social: Provide diverse learning channels, such as in-person courses and digital learning platforms, to meet different learning needs and schedules, enabling lifelong learning and enhancing workplace competitiveness. Negative / Potential / Governance: Continuing education and training require significant time and resources, increasing manpower pressure. Negative / Potential / Social: Employees may be poached by other hospitals after training, leading to talent loss. Negative / Potential / Social: Without supervision and follow-up, resources may be wasted or results may be ineffective.
Policies	◉ Established online training for new employees and a "13 Job Categories" training system. ◉ Nursing Department developed the "Nurse Professional Development Program." ◉ Promote holistic care, interdisciplinary collaboration, and the clinical instructor system. ◉ Provide subsidies for domestic and overseas further education, promotion training for various job categories, certification incentives, and career guidance. ◉ Implement hospital-wide general education courses (e.g., quality management, infection control, disaster response) to strengthen overall competencies.

Material Topic	Talent Development
Strategies	◉ Provide diverse training methods (in-person, online), cross-specialty training, and simulation exercises. ◉ Implement CBME (Competency-Based Medical Education) teaching programs. ◉ Design the “Five-Wholes” training framework (whole-person, whole-family, whole-community, whole-team, whole-process). ◉ Develop clinical instructors and establish a teaching certification system. ◉ Offer evidence-based medicine courses, competitions, and publication opportunities to strengthen research and practical applications. ◉ Promote team-oriented teaching and care collaboration mechanisms (e.g., OSCE examiner training, teaching competitions).
Goals & Objectives	**Short-Term Goals (2025–2026)** ◉ Conduct regular peer/supervisor evaluations, performance appraisals, and unit feedback. ◉ Undergo audits and indicator comparisons from the Joint Commission of Taiwan and various education evaluation programs. **Mid-Term Goals (2027-2030)** ◉ Introduce CBME into the training systems of 13 medical professional categories. ◉ Strengthen the practice of holistic care and interdisciplinary collaboration. ◉ Actively cultivate professional and managerial talent. **Long-Term Goals (Post-2030)** ◉ Build a comprehensive career development pathway. ◉ Become a model hospital for patient-centered “Five-Wholes” care. ◉ Promote a talent development system that equally values clinical care, teaching, and research.
Management Evaluation Mechanism	◉ Evaluate through four internal dimensions: satisfaction, knowledge acquisition, behavior change, and results. ◉ Establish teaching indicators and an action plan tracking mechanism. ◉ Conduct regular peer/supervisor evaluations, performance appraisals, and unit feedback. ◉ Undergo audits and indicator comparisons from the Joint Commission of Taiwan and various education evaluation programs.
Performance and Adjustment	◉ Physician training completion rate: 99.1%; other professional categories: 100%. ◉ Certification rate for holistic care clinical instructors: 99.4%; advanced training completion: 22.4%. ◉ 125 PGY physicians trained annually, with a 100% completion rate and 98% satisfaction rate. ◉ 85 medical interns participated in the OSCE, with a 98.7% pass rate.

5.1.1 Shared On-campus Resources

Clinical Skills Center

The Hospital's teaching materials room, through the classroom management system, assists staff in reserving training space at the College of Medicine B1 "Clinical Skills Center." This center serves as a national OSCE testing venue, capable of conducting 12-station objective structured clinical examinations (OSCE) for Western medicine physicians and healthcare personnel. It is also used for routine clinical skills practice, including clinical medical diagnostic training, nursing personnel clinical skills education, emergency team training, and skills training for UGY and PGY.

Image / Clinical Skills Practice

The Clinical Skills Center is equipped with fully functional simulated consultation rooms, intensive care units, and various computerized models for cardiopulmonary resuscitation, tracheal intubation, nasogastric tube insertion, and catheterization. These facilities enable medical staff to integrate basic medical knowledge with humanistic care, transforming it into clear clinical reasoning, thereby allowing them to accumulate sufficient clinical training experience before directly engaging with patients.

The OSCE examination is part of the physician national licensure qualification, jointly organized by the "Medical Clinical Skills Examination Affairs Committee" composed of teaching hospitals accredited by the Ministry of Health and Welfare, the Taiwan Medical Education Association, the Ministry of Health and Welfare, the Ministry of Education, and the Ministry of Examination of the Examination Yuan. Candidates are assessed using "standardized patients" (certified patient actors) in areas including medical history taking, physical examination, clinical judgment and patient management, communication and health education, attitude, and professional conduct, as well as demonstration of basic clinical skills. In 2024, 85 of the Hospital's medical interns participated in the OSCE, achieving a pass rate of 98.7%. NCKU Hospital is one of the national examination venues for this test, responsible for overall examination planning and organization.

2024 Annual Execution Results of Strategic Objectives

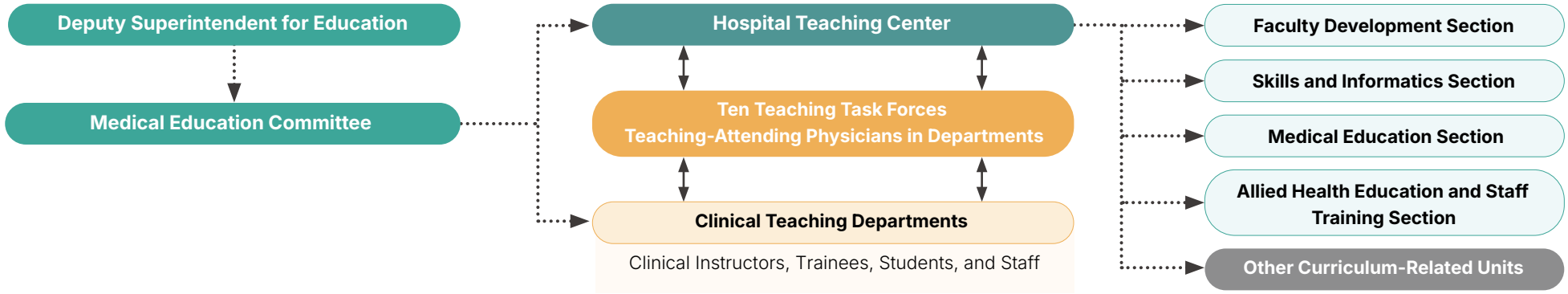
Item / Objective	Annual Goals	Implementation Status	Target Achievement
L4-1 OSCE National Examination Passing Rate at the Hospital and Increase in Number of OSCE Examiners by Department	❶ The Hospital's OSCE national examination passing rate ≧ national passing rate ❷ Increase in number of examiners: Department of Surgery ≧ 4, Department of Emergency Medicine ≧ 2	❶ OSCE national examination passing rate: 98.81% ❷ Increase in OSCE examiners: 1 from the Department of Emergency Medicine, 1 from the Department of Oncology Reason for not meeting target: The number of newly promoted/recruited attending physicians in the Departments of Surgery and Emergency Medicine was below the target, resulting in failure to achieve the goal. The 2025 goal has been revised to： "Increase in number of OSCE examiners： If the number of examiners in Internal Medicine, Surgery, Obstetrics & Gynecology, Pediatrics, and Emergency Medicine is below 60% of the number of attending physicians, at least one newly trained examiner or 50% of newly promoted attending physicians from the previous year must be appointed."	×
L4-2 Number of OSCE Evaluation Sessions Conducted for Allied Health Professions	Conduct at least 6 OSCE evaluation sessions for allied health professions	A total of 18 OSCE evaluation sessions were conducted for allied health professions	O

5.1.2 NCKUH Teaching Center

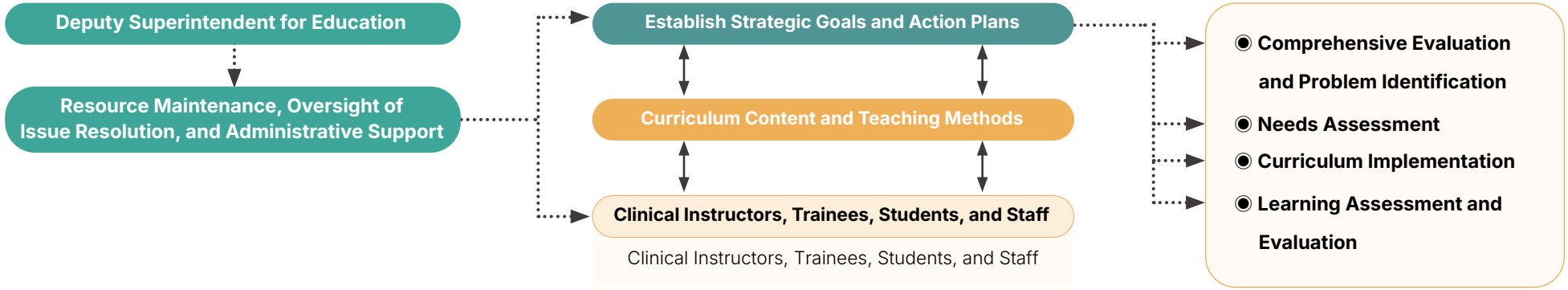
Internal Teaching Operation and Division of Labor

The Teaching Center is a first-tier unit of the Hospital, responsible for the coordination, planning, and implementation of all hospital-wide teaching courses and activities. Upholding the mission of being "the driver of training quality in medical centers," the Center aligns with the Hospital's vision and strategies, striving to enhance teaching quality and cultivate comprehensive, high-quality healthcare professionals across various fields. It also establishes partnerships with all departments throughout the Hospital, working together to fulfill the Hospital's educational mission and realize the vision of "becoming a top-tier teaching center among domestic medical centers."

Hospital Teaching Operation System



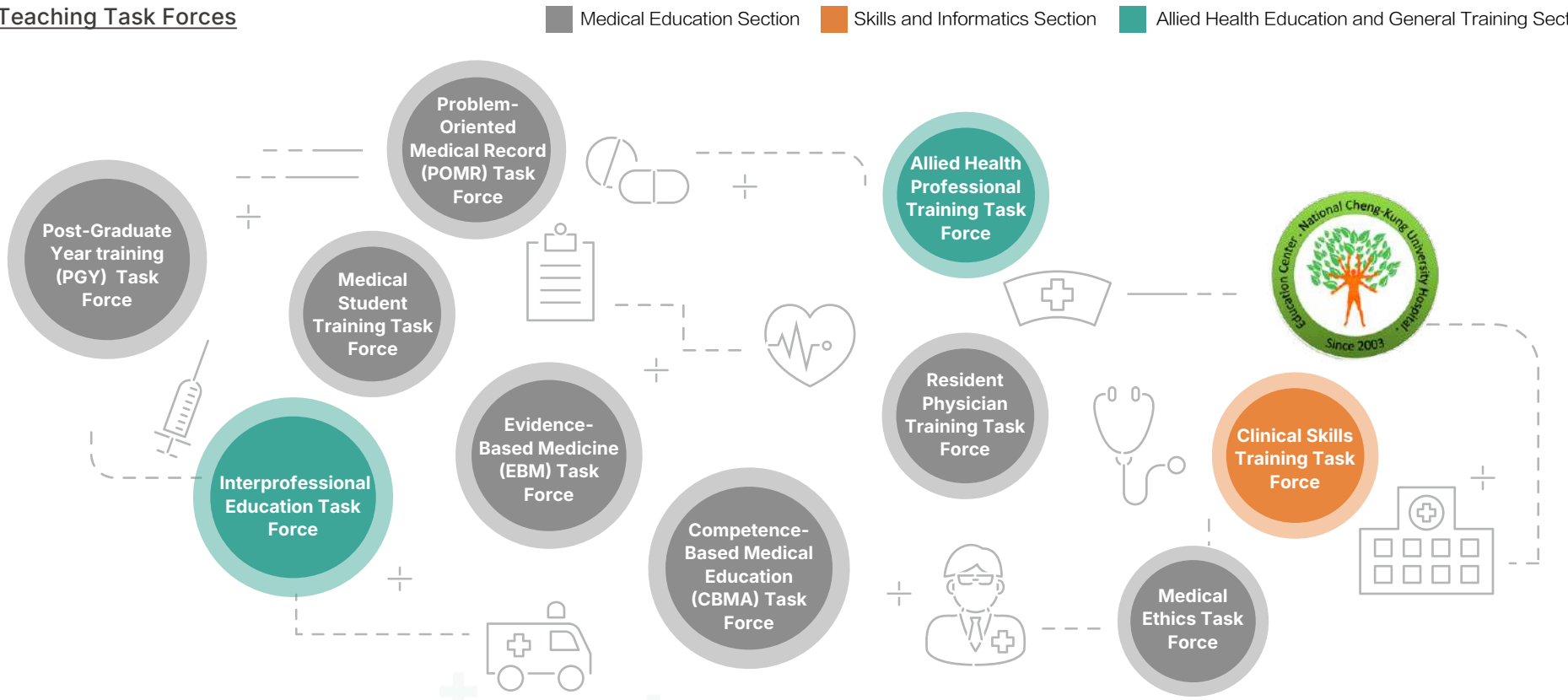
Hospital Teaching Operation System



The Director of the Center is responsible for setting objectives and overseeing the management of teaching affairs. The Executive Director integrates and supervises teaching operations, while the Deputy Director coordinates and handles various tasks within the Center. Teaching Attending Physicians plan and implement teaching-related work. Based on the nature of its missions, the Teaching Center is organized into four divisions: Faculty Development Division, Skills and Information Division, Medical Education Division, and Allied Health Education and Staff Training Division. Within the Medical Education Committee, there are ten teaching task forces: Interns, PGY, Residents, Allied Health Professionals, Clinical Skills, POMR, Interprofessional Teams, EBM, Medical Ethics, and CBME task forces. A “Staff Basic Education Training Review Meeting” is held every six months to track course implementation results and revise the annual “Staff Basic Course Education Training Plan” accordingly.

In 2024, the physician training achievement rate reached 99.1%, and other professional categories achieved 100%. A total of 125 PGY physicians completed training, with a 100% completion rate and 98% satisfaction rate.

Ten Teaching Task Forces



Clinical Faculty Development

NCKU Hospital encourages newly appointed attending physicians to proactively participate in the “Clinical Teacher Instructional Training Program” and actively increases the proportion of “Advanced Faculty in Holistic Care” throughout the Hospital. Hospital-level guidelines, including the “NCKU Hospital Clinical Faculty Development Guidelines” and the “NCKU Hospital Faculty Development Program,” have been established.

The Faculty Development Division of the Teaching Center designs relevant training programs based on the professional knowledge development of each discipline and clinical care needs, following the development guidelines and the Faculty Development Program (which includes holistic care). Courses cover teaching theories and regulations, teaching material creation, instructional methods and curriculum design, teaching assessment, communication and feedback, and holistic care medical education, aiming to cultivate professional talents in medical education.

Hours Requirement and Certification Criteria

Item / Objective	Resident physician instructor	General clinical teacher	Holistic care clinical teacher	Advanced holistic care teacher	Teaching program director
Basic teaching course	O	O	O	O	O
Basic holistic care course	X	X	O	O	O
Core holistic care course	X	X	X	O	X
Training course for teaching directors	X	X	X	X	O

2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
L1-3 Ratio of First-Year Attending Physicians Completing General Medicine Faculty Training	A total of 10 newly appointed attending physicians in internal medicine, surgery, obstetrics and gynecology, pediatrics, and emergency medicine are to obtain general medicine faculty qualification within the year.	18 physicians completed the training in the Hospital.	O
L2-1 Ratio of Clinical Teachers Trained as Advanced Holistic Care Instructors	Train advanced holistic care instructors across the Hospital to reach 10%, with 80% of them achieving Kirkpatrick Level III learning outcomes.	22.07% of clinical teachers became advanced holistic care instructors across the Hospital, with 80% achieving Kirkpatrick Level III learning outcomes.	O
L2-2 Completion Rate of General Medicine Faculty Training Effectiveness Evaluation	50% of trained instructors are to complete the effectiveness evaluation of general medicine faculty training.	100% of trained instructors completed the effectiveness evaluation of general medicine faculty training.	O
L3-3 Number of Teaching Application Cases Published After Benchmarking	4 cases of benchmarking learning application to be published.	A total of 11 benchmarking learning cases were published.	O

5.2 Holistic Care Training

5.2.1 Life, Love, Excellence, Innovation

Practicing Humanities and Social Care

The Teaching Center continues to serve as the core driver of medical education. Each year, over 2,700 individuals complete clinical medical education internships, and training is provided to various categories of healthcare personnel, with more than 30,000 on-the-job education and training sessions annually.

The training content for each professional category is formulated in line with the Hospital's short-, mid-, and long-term development plans and the trends in medical development. Training outcomes are regularly reviewed and submitted to the Medical Education Committee for evaluation. Every effort is made to uphold the Hospital's core values of "Life, Love, Excellence, Innovation," promote a "patient-centered" culture, cultivate healthcare professionals with both humanistic literacy and professional competence, and ultimately create an environment of holistic medical care.

Palliative Care, Geriatric Nursing, and HIV Team

With Taiwan's rapidly aging population expected to enter a super-aged society by 2025, the demand for elderly care continues to grow. The Nursing Department of NCKU Hospital has long established a Geriatric Care Task Force and developed an advanced geriatric care system to help nurses become experts in elder care. Nurses are trained to begin with empathy and think from the elderly's perspective, addressing their needs from hospitalization through discharge. This training model will also be extended to affiliated hospitals co-managed with the Ministry of Health and Welfare, such as Tainan Hospital, to build a locally rooted, age-friendly care network.

The Geriatric Care Task Force incorporates the concept of service design in its training. In the first phase, they create elderly personas by compiling and summarizing common characteristics of elderly patients in care settings, developing several semi-fictional prototype cases to help nurses understand diverse elderly profiles. The second phase integrates standardized patients based on the personas' background and scenarios. Through interactive workshops, nurses engage in conversations, assessments, and care planning to learn how to identify the core needs of elderly patients.

Image / Geriatric Care Task Force, Nursing Department

Traditionally, the emergency department has been viewed as a setting primarily focused on diagnosing and treating acute illnesses and trauma, not a preferred site for palliative care. However, in response to the increasing demand for emergency and palliative medical services for the elderly, the Emergency Department of NCKU Hospital began offering palliative care in 2017. In 2022, a dedicated emergency palliative care room (Room R88, single-bed ward) was established to provide a private space that accommodates family presence. The service integrates interdisciplinary team resources, including inpatient and home hospice care teams, pharmacists, psychologists, social workers, and chaplains, to offer joint consultation and care services to emergency patients and their families in need of palliative care.

Image / Friendly HIV Care Task Force

In the future, the Emergency Department will develop various assessment methods and forms based on patients' palliative care needs. These tools aim to detect physical, psychological, and spiritual issues early—caused by illness or trauma—from a palliative care perspective, enabling comprehensive evaluation and appropriate interventions to prevent and alleviate suffering while improving patients' quality of life.

The Hospital has also been committed to providing comprehensive, high-quality care for individuals living with HIV, striving to eliminate discrimination and break stigmas to ensure patients receive equal and respectful services across departments. According to internal surveys, 92% of medical staff provide nondiscriminatory care, 88% are willing to care for patients with HIV themselves or with colleagues, and 96% agree the hospital offers sufficient protective measures to reduce infection risk among healthcare workers.

In late 2024, a "Friendly HIV Care Task Force" will be established to formulate a cross-disciplinary HIV-friendly care initiative, aiming to build a more secure and stigma-free medical environment.

2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
L1-1 Percentage of Employees Participating in One-Hour Palliative Care Course	At least 80% of employees participate in a one-hour palliative care course, and the annual average course satisfaction rating reaches 4 or above (on a 5-point scale)	93.59% of employees participated in the one-hour palliative care course, and the annual average course satisfaction rating reached 4.9	O
L1-2 Number of New Medical Personnel Completing Palliative Care Training	❶ At least 4 new attending physicians of the Hospital complete basic or advanced training for palliative care teams ❷ 8 new nurses from the Nursing Department complete basic or advanced training for palliative care teams	❶ 4 new attending physicians of the Hospital completed basic training for palliative care teams ❷ 8 new nurses from the Nursing Department completed training for palliative care teams	O

Interprofessional Collaboration

With the advancement of medical technology and the increasing complexity of health issues, a single medical profession can no longer fully address the overall needs of patients. Therefore, through interprofessional team collaboration, a patient-centered integrated care model is established. This not only enhances medical quality and safety but also reduces redundant treatments, shortens hospital stays, and strengthens the patient care experience and health outcomes.

To promote team collaboration skills, the Teaching Center has introduced the Healthcare Matrix tool into its training, emphasizing a positive learning environment focused on systemic and team-based improvement, and guiding healthcare professionals from diverse backgrounds to engage in comprehensive dialogue.

Through the Healthcare Matrix, teams can examine critical aspects of patient care from multiple perspectives—such as communication, teamwork, patient engagement, clinical judgment, and systemic errors—which are core components of patient safety. Based on each case, a holistic analysis and reflection are conducted on each aspect, discussing whether any issues occurred during the care process, identifying their root causes, and exploring possible improvement strategies.

2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
L3-1 Application of Interprofessional Team Teaching Cases in Holistic Care Education and Reflection	The proportion of interdisciplinary teams using the Healthcare Matrix to discuss clinical cases and solve patient issues reaches 90%.	The proportion of interdisciplinary teams applying the Healthcare Matrix to discuss cases reaches 100%.	O
L3-2 Implementation of Competency-Based Teaching Objectives and Competency Assessment in Shared Learning Fields Across Professions	100% of medical professionals review and apply clinical cases to participate in interprofessional teaching competitions	Participation rate of medical professionals reaches 100%	O

5.2.2 Innovative Teaching and Continuous Improvement

Needs Assessment and Implementation

NCKU Hospital continues to implement various smart technologies to enhance care quality. For example, since 2022, the hospice home care team has adopted a smart hospice care service platform, enabling medical personnel to remotely monitor patients' physiological status and arrange home visits or provide remote assistance to family members when needed. From the end of 2023, the hospice ward has used Hui Jia Smart Mattresses that issue alerts when terminal patients exhibit abnormal breathing, prompting nurses to visit the ward immediately to provide end-of-life care.

Teaching activities for each professional category are planned, reviewed, promoted, coordinated, and evaluated by the teaching program leader or course coordinator. Reviews and revisions of teaching plans, courses, and evaluation methods are conducted regularly (monthly or quarterly) in teaching meetings based on hospital goals and feedback from instructors and trainees. Quarterly, representatives attend the Medical Education Committee and the Teaching Task Force Meeting of the Teaching Center for reporting and follow-up on teaching implementation.

To encourage each professional category to revise and improve their teaching programs using the PDCA method, the Hospital has established the "Teaching Improvement PDCA Incentive" policy. Annual incentive competitions are held to promote continuous improvement and enhancement of clinical teaching quality, thereby achieving mutual learning benefits across professions.

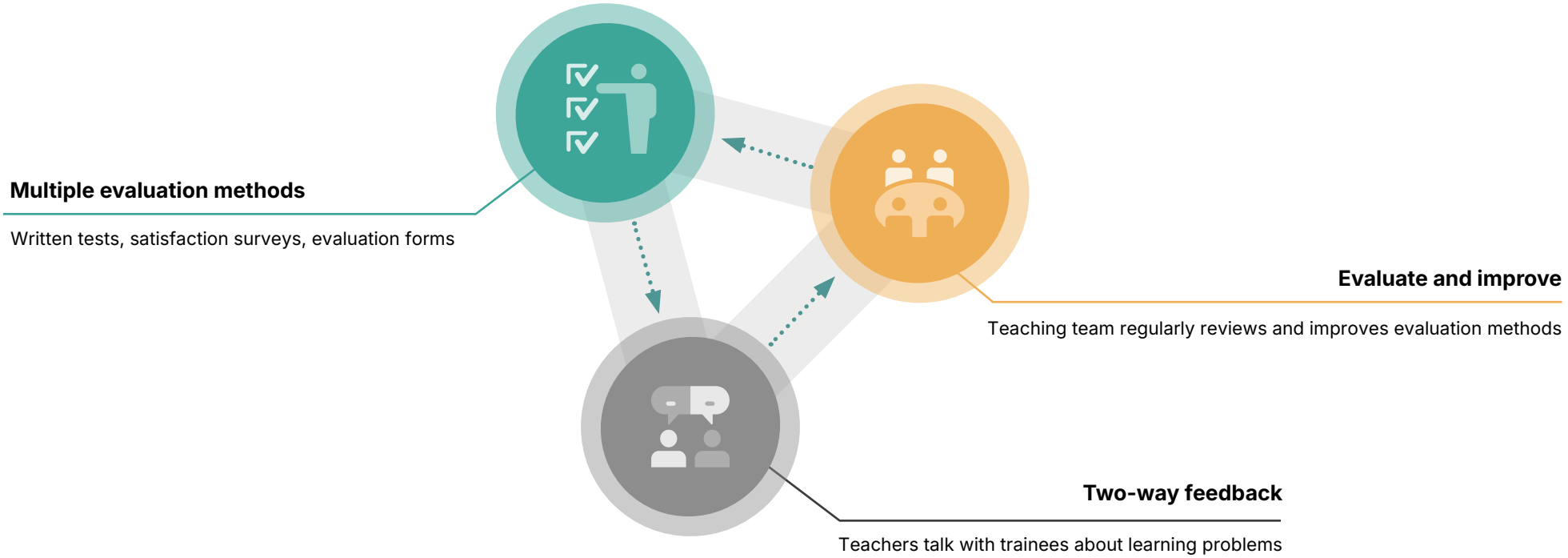
Learning Effectiveness Evaluation

The Hospital has established corresponding evaluation mechanisms for training across all professional categories, including assessments of training outcomes and teaching effectiveness. Trainees can view their individual training plans, various assessment results, and teacher feedback through the “NCKU Hospital e-Learning Portfolio” system. This system periodically sends email reminders to instructors for conducting evaluations and revises teaching plans based on student feedback. It also simplifies cumbersome administrative procedures, allowing instructors to focus on teaching and helping learners grow. This, in turn, enhances professional competencies across all categories and improves the quality of patient care.

To ensure that healthcare professionals possess essential competencies in critical thinking, clinical problem analysis, literature search, and evidence-based application for medical decision-making, NCKU Hospital regularly offers applied courses to strengthen evidence-based thinking and actively engages in related research and competitions. In 2024, a total of 7 evidence-related papers were produced. In the 25th National Healthcare Quality Award competition under the Evidence-Based Medicine category, the Clinical Literature Search Group won the Gold Award, Honorable Mention, and Merit Award, while the Novice Group received the Silver Award, Bronze Award, and Honorable Mention.

Furthermore, the Hospital’s teaching activities go beyond practical training, transforming research design and data analysis into academically valuable knowledge outputs that align with trends in medical education both domestically and internationally. In 2024, the Teaching Center presented 17 papers at the Taiwan Association of Medical Education and 7 papers at the AMEE European Medical Education Conference. Additionally, 1 paper was published in a medical education journal, demonstrating the Hospital’s continued dedication and contribution to medical education and academic research.

Cycle Diagram of Learning and Teaching Evaluation Improvement



2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
L1-4 Conduct Evidence-Based Medicine Application Courses to Cultivate Talent; Number of Teams Participating in Evidence-Based Medicine Competitions and Number of Completed Evidence-Related Literature Submissions	❶ At least 1 team participating in the evidence-based medicine competition organized by the Joint Commission of Taiwan ❷ At least 1 literature submission completed	❶ A total of 6 teams participated in the evidence-based medicine competition ❷ Literature submission completed	O

6

Chapter

HEALTHCARE CO-PROSPERITY AND HAPPY WORKPLACE

6 Healthcare Co-prosperity and Happy Workplace

6.1 Talent Attraction and Retention

Material Topic	Happy Workplace (Occupational Health and Safety)
Importance	◉ A happy workplace concerns the physical and mental well-being of employees. Providing a safe, healthy, and supportive work environment not only safeguards fundamental rights but also helps improve job satisfaction and operational performance. Emphasizing occupational health and safety can reduce the risk of occupational accidents and regulatory liabilities, strengthen talent attraction and retention, demonstrate the enterprise's commitment to employees and society, and lay the foundation for sustainable operations.
Influence and Impact	Positive / Actual / Governance: A healthy and safe environment makes employees feel valued, helping to boost work motivation and loyalty. Positive / Actual / Governance: Proactively managing safety risks can effectively reduce occupational accidents. Positive / Actual / Social: Standardizes processes, enhances care rights, and strengthens public trust. Positive / Potential / Governance: Enhancing corporate image helps attract top talent and build a positive corporate reputation.
Policies	◉ Established the Occupational Safety and Health Committee and formulated the "Occupational Safety and Health Management Guidelines." ◉ Provided an employee assistance hotline and Employee Assistance Program (EAP) services to support employees' physical, mental, and spiritual well-being.
Strategies	◉ Established dedicated breastfeeding (lactation) rooms for employees. ◉ Established the Hospital Infant Daycare Center to provide daycare services for employees' children aged 0 to 2. ◉ Offered flexible working hours and diversified shift systems. ◉ Held health promotion courses on an irregular basis. ◉ Provided psychological counseling for employees with full personnel expenses covered. ◉ Offered a variety of employee benefits.

Material Topic	Happy Workplace (Occupational Health and Safety)		
Goals & Objectives	**Short-Term Goals (2025–2026)** ◉ Improvement rate for deficiencies found in hospital-wide safety inspections of medium- and high-risk work environments exceeds 95%. ◉ Increase in the rate of employee self-paid health checkups.	**Mid-Term Goals (2027-2030)** ◉ Zero occupational accidents. ◉ Employee voluntary reporting rate for maternity health protection reaches 80%.	**Long-Term Goals (Post-2030)** ◉ Zero occupational accidents. ◉ Issuance of childcare subsidies to fully support employees who place their children in childcare institutions.
Management Evaluation Mechanism	◉ Hold one hospital affairs meeting and one medical affairs meeting per quarter to discuss relevant matters with the Superintendent. ◉ Hold one Occupational Safety and Health Committee meeting per quarter for ongoing review. ◉ Establish a two-way feedback mechanism for annual communication with employees. ◉ Provide diverse communication channels to listen to employee suggestions.		
Performance and Adjustment	◉ Employee satisfaction rate reached 88.7%. ◉ Provide three free psychological counseling sessions and online consultations per year to help employees relieve stress. ◉ In 2024, a total of 94,956 participants, including contractors, received occupational safety training; training expenses totaled NTD 1,503,103. ◉ In 2024, the completion rate of pre-employment health checkups for new employees reached 100%; in-service employee health checkups also achieved a 100% completion rate.		

6.1.1 Diverse Employment

Employee Statistics

NCKU Hospital is committed to creating a diverse and inclusive working environment. We firmly believe that talents from different backgrounds, professions, and experiences can bring diverse perspectives and innovative momentum to medical services, thereby enhancing the overall quality of care and organizational resilience. As of the end of 2024, the total number of NCKU Hospital employees, including part-time staff, reached 5,047, covering physicians, nurses, allied health professionals, project-based research assistants, and part-time personnel. In addition, there are seven categories of non-employee workers—general affairs, supply, engineering, equipment, information, laboratory, and caregiving service personnel—all of whom operate through labor outsourcing or procurement projects, totaling 95 contracts. The total number of non-employee personnel throughout the year was 393, an increase of 1 person compared to 2023, indicating stable overall headcount.

Furthermore, according to statistics, NCKU Hospital has continuously focused on the employment of minority and disadvantaged groups over the past three years, with hires spanning different age groups and genders. In 2024, the Hospital employed a total of 137 staff members from disadvantaged groups.

NCKU Hospital also places importance on local engagement and the development of regional talent. All members of the Hospital's senior management are local residents. By hiring management personnel with local backgrounds and professional expertise, the Hospital strengthens its understanding of and response to local needs, promoting localized organizational governance and the fulfillment of social responsibilities. In addition, the Hospital adheres to the relevant provisions of the Indigenous Peoples Employment Rights Protection Act to ensure that the employment rights of Indigenous staff are properly safeguarded and respected, thereby fulfilling the sustainable values of workplace equity and social inclusion.

Employee Statistics

Contract Type		Male	Female	Total
Number of Employed Staff (A)		1,293	3,754	5,047
By Contract Type	Fixed-term Contract Employees	112	189	301
	Non-fixed-term Contract Employees	1,181	3,565	4,746
By Hourly Guarantee	Employees with Hourly Guarantee	1,261	3,650	4,911
	Employees without Hourly Guarantee	32	104	136
By Hourly Guarantee	Full-time Employees	1,261	3,650	4,911
	Part-time Employees	32	104	136
Non-employee Personnel Currently Serving at the Hospital Campuses		Part-time Employees		

The statistical cut-off date is December 31, 2024.

Types and number of non-employee workers

Non-Employee Worker Category	Total Number of Workers
Beauty and Hairdressing Personnel	4
Catering Service Personnel	136
Childcare Personnel	19
Electrical and Mechanical Maintenance Personnel	78
Financial Industry Personnel	10
Medical Equipment Maintenance Providers	36
Security Personnel	21
Cleaning Personnel	287
Care Service Workers	198
Medical Research Personnel	105
Total	894

The statistical cut-off date is December 31, 2024.

Employee Statistics

Year			2022	2023	2024
Item/Gender		Age	Number of People	Number of People	Number of People
Senior Executives	Male	Under 30 years old	0	0	0
		30–50 years old	9	10	8
		Over 50 years old	39	35	37
	Female	Under 30 years old	0	0	0
		30–50 years old	3	2	1
		Over 50 years old	7	9	9
Total Senior Executives			58	56	55
Non-Senior Staff	Male	Under 30 years old	308	313	293
		30–50 years old	683	687	706
		Over 50 years old	245	249	249
	Female	Under 30 years old	1,129	1,008	897
		30–50 years old	2,159	2,248	2,332
		Over 50 years old	497	502	515
Total Non-Senior Staff			5,021	5,007	4,992
Total Full-Time Staff			5,079	5,063	5,047

Note：Senior executive level is defined as first-level supervisors and above in administrative, medical, and medical affairs units.

Employee Statistics

Year			2022	2023	2024
Item/Gender		Age	Number of People	Number of People	Number of People
Minority and Disadvantaged Groups	Male	Under 30 years old	5	19	3
		30–50 years old	36	54	31
		Over 50 years old	12	7	15
	Female	Under 30 years old	15	20	7
		30–50 years old	59	28	61
		Over 50 years old	16	10	20
Total			143	138	137

New Hire and Turnover Rates

As of the end of 2024, NCKU Hospital had 1,252 new employees, with a total new hire rate of 24.81%, an increase of 2.21% compared to 2023. In addition, 657 employees left the Hospital, with a total turnover rate of 12.02%, showing little change from 2023.

The Hospital complies with relevant provisions of the Labor Standards Act. In the event of a major operational change or the termination of an employment relationship, the employment contract with the employee is terminated in accordance with government regulations, with the notice period as follows:

1. mployees who have worked for more than three months but less than one year: 10 days' notice.
2. Employees who have worked for more than one year but less than three years: 20 days' notice.
3. Employees who have worked for more than three years: 30 days' notice.

Employee New Hire Rate Statistics for the Past Three Years

Year	2022				2023				2024			
Gender	Male		Female		Male		Female		Male		Female	
Item	Number of People	New Hire Rate (%)	Number of People	New Hire Rate (%)	Number of People	New Hire Rate (%)	Number of People	New Hire Rate (%)	Number of People	New Hire Rate (%)	Number of People	New Hire Rate (%)
Under 30 years old	278	5.47	561	11.04	303	5.98	473	9.34	110	2.18	513	10.16
30–50 years old	78	1.54	204	4.02	90	1.78	208	4.11	344	6.82	232	4.60
Over 50 years old	13	0.26	26	0.51	14	0.28	29	0.57	21	0.42	32	0.63
Total New Hires	1,160				1,117				1,252			
Total Number of Employees	5,080				5,064				5,047			

Employee New Hire Rate Statistics for the Past Three Years

Overall New Hire Rate (%)	22.83	22.06	24.81

Notes:

❶ New hire rate by gender and age group = Number of newly hired male/female employees in that age group / Total number of employees at operating sites at the end of the year.

❷ Total employee hiring rate = Total number of new hires during the year / Total number of employees at operating sites at the end of the year.

❸ Total employee hiring rate = Total number of new hires during the year / Total number of employees at operating sites at the end of the year.

Employee Turnover Rate Statistics for the Past Three Years

Year	**2022**				**2023**				**2024**			
Gender	**男性**		**女性**		**男性**		**女性**		**男性**		**女性**	
Item	**Number of People**	**Turnover Rate(%)**	**Number of People**	**Turnover Rate(%)**	**Number of People**	**Turnover Rate(%)**	**Number of People**	**Turnover Rate(%)**	**Number of People**	**Turnover Rate(%)**	**Number of People**	**Turnover Rate(%)**
Under 30 years old	74	1.46	239	4.70	62	1.22	203	4.01	78	1.55	203	4.02
30–50 years old	50	0.98	206	4.06	70	1.38	218	0.99	76	1.51	222	4.40
Over 50 years old	13	0.26	37	0.73	23	0.45	63	1.24	26	0.52	52	1.03
Total New Hires	619				639				657			
Total Number of Employees	5,080				5,064				5,047			
Over all Turnover Rate (%)	12.19				12.62				13.02			

Notes:

❶ New hire rate by gender and age group = Number of newly hired male/female employees in that age group / Total number of employees at operating sites at the end of the year.

❷ Total employee hiring rate = Total number of new hires during the year / Total number of employees at operating sites at the end of the year.

Promotion and Evaluation

NCKU Hospital has established a "Personnel Review Committee," which holds regular meetings in accordance with organizational regulations and maintains complete meeting records. The Hospital also implements appropriate rewards and penalties based on employees' specific performance, and compiles such cases as references for the Performance Evaluation Committee. Disciplinary and reward measures are executed based on the results of year-end performance evaluations.

The Hospital's promotion and evaluation system—covering system revisions, personnel promotions, and reward and penalty procedures—are reviewed by relevant committees, with participation from grassroots employee representatives to ensure procedural fairness and diversity of perspectives. The evaluation process is transparent and includes a two-way feedback mechanism.

For those whose performance is evaluated as unsatisfactory or below job requirements, the Hospital assigns the responsible unit to provide guidance and support, recording the guidance process and improvement plans for subsequent monitoring and tracking. Additionally, the Hospital offers continuing education and learning resources according to employee needs to support career development and professional growth. A comprehensive and motivating system helps improve the quality of medical services, strengthen organizational cohesion, and realize goals of people-centered care and sustainable development.
Furthermore, high-performing contract medical personnel may participate in public recruitment to be appointed as official public medical personnel; outstanding public servants may also be promoted to supervisory positions according to internal promotion procedures, establishing a motivating and developmental career pathway. In 2024, 100% of employees underwent evaluation, and the relevant regular evaluation information is as follows:

<table>
<tr><th>Evaluation Category</th><th>Personnel Category</th><th>Schedule</th><th>Transparent Execution Process</th><th>Two-Way Feedback Mechanism</th></tr>
<tr><td rowspan="2">Routine Evaluation</td><td>Civil Servants</td><td>May, September</td><td rowspan="2">Records of two-way feedback interviews are documented on the routine performance evaluation record form</td><td rowspan="3">1.Unit supervisors may conduct individual or group feedback interviews and may delegate authority by levels.
2.Two-way feedback execution methods:
(1) Unit supervisors evaluate based on assessment items and explain the evaluation results to employees
(2) Unit supervisors listen to employees' opinions on the evaluation results.
(3) Unit supervisors retain records of the two-way feedback interview, with signatures from both the supervisor and the employee.</td></tr>
<tr><td>Contract Personnel</td><td>June</td></tr>
<tr><td>June Year-End Evaluation</td><td>All Personnel</td><td>Annually at Year-End</td><td>Records of two-way feedback interviews are documented on the official performance notification receipt form, the performance evaluation form for civil servants (or contract personnel), or the year-end evaluation roster for contract personnel</td></tr>
<tr><td colspan="5">Note：Hospital staff includes all medical and administrative personnel (including contract employees).</td></tr>
</table>

Assessment Statistics				
Item	Management	Non-management	Direct Personnel	Indirect Personnel
Percentage of Male Employees Evaluated	1.68	22.20	60.53	7.66
Percentage of Female Employees Evaluated	2.47	73.65	13.10	18.71

2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
C1-3 Promote Team Resource Management / Employee Workplace Resilience	Hold at least one TRM and resilience-related course every six months	Held 3 resilience courses	O
C1-3 Promote Team Resource Management / Employee Workplace Resilience	Satisfaction with TRM and resilience courses ≥ 80%	Satisfaction consistently ≥ 95%	O

6.1.2 Addressing Medical and Nursing Staff Shortages

The overall employee satisfaction rate at NCKU Hospital is 88.7%, slightly below expectations. Possible reasons include unmet expectations regarding salary and bonuses, as well as increased workload. Moreover, the satisfaction rate for fatigue management among medical and nursing personnel is 83.6%, indicating room for improvement. This may be due to ongoing manpower attrition, which increases the workload and working hours of existing staff, thereby affecting job satisfaction and physical and mental health. To address the shortage of medical and nursing staff and enhance retention, the Hospital has implemented the following seven measures.

Talent Attraction and Retention

nhance Compensation and Benefits	Conduct market salary surveys based on seniority and positions; increase night shift allowances, resignation retention bonuses, and long-service awards.
Continuing Education Support	Collaborate with academic institutions to provide on-the-job education subsidies with retention agreements; offer opportunities for domestic and international study, exchange programs, and research to increase professional fulfillment.
Improve Work Environment	Reduce non-professional clinical tasks for nursing staff; implement AI-driven smart workflows to decrease workload.
Establish Response Teams	Strengthen manpower reserves and training; intervene early to provide care for personnel at high risk of resignation.
Enhance Organizational Identity and Culture	Regularly hold recognition events and model-sharing sessions to foster team pride.
Promote Career Development	Establish clear promotion pathways.
Regional Collaborative Defense	Form regional healthcare alliances to share human resources.

Human Resource Strategy

To safeguard occupational health and employment rights, NCKU Hospital has established the “Employee Rights Policy,” which covers employment non-discrimination, workplace safety and hygiene, reasonable working hours, gender equality, employment protection for Indigenous peoples and persons with disabilities, collective bargaining, and grievance mechanisms. The Hospital disseminates this information through multiple channels including the knowledge management system, personnel bulletins, and public websites to help employees understand and exercise their rights. A comprehensive and transparent system is in place to regularly review and revise work regulations, with grassroots employee representatives participating in the revision process to ensure diverse opinions are included in decision-making. Personnel at all levels have a clear understanding of their responsibilities and delegated authority and implement them accordingly. The Human Resources Department regularly examines reasons for employee resignation, salary structures, and leave implementation. Through continuous improvement, the Hospital aims to enhance employee well-being and organizational stability.

Compliance with Labor Regulations and Protection of Work Environment

As a medical institution, the Hospital operates 24 hours a day without interruption to meet healthcare service demands. In accordance with Article 32, Paragraph 4 of the Labor Standards Act, when employees are required to work overtime due to natural disasters, incidents, or emergencies, the Hospital notifies the enterprise union within 24 hours of the commencement of extended work and subsequently provides appropriate rest. For civil servants, the Hospital complies with Article 4 of the "Regulations on Civil Servants' Work Attendance for the Executive Yuan and Its Subordinate Central and Local Agencies," which stipulates that, except in cases involving the rescue of major disasters, handling of emergencies or major incidents, or the implementation of major projects, the daily working hours shall not exceed 14 hours, and the total extended working hours in a month shall not exceed 80 hours. In the event of overtime beyond these limits, the Hospital reports the situation to the Ministry of Education within one month from the date of occurrence. Furthermore, the Hospital strictly adheres to Article 45 of the Labor Standards Act and does not employ child labor under the age of 15.

Accessible and Diversified Reporting Channels

The Hospital provides multiple reporting channels, including the "Superintendent's Mailbox," the "Cheng Kung Window Employee Feedback Platform," and the "Employee Communication Corner" in the personnel system, to allow both external customers and employees to voice concerns.

Employee Misconduct Complaint Channels	
Receiving Unit	Occupational Safety and Health Office
Service Address	National Cheng Kung University Hospital, No. 138, Shengli Road, North District, Tainan City
Complaint Method	Telephone：(06) 2353535 #3811
	Email： em72214@ncku.edu.tw

External Stakeholder Misconduct Complaint Channels	
Receiving Unit	Secretariat (also responsible for civil service ethics)
Service Address	National Cheng Kung University Medical School Hospital, No. 138, Shengli Road, North District, Tainan City
Complaint Method	Telephone：(06) 2353535 #6632
	Email：n045502@mail.hosp.ncku.edu.tw

2024 AI Nurse Program

Faced with the dual challenges of a declining birthrate and an aging population in Taiwan, medical demands continue to rise while structural shortages in healthcare manpower pose serious threats to the stability of the medical system and the quality of patient care. Recognizing the critical importance of stable healthcare manpower for the sustainable development of medical services, NCKU Hospital has proactively implemented multiple strategies to attract, cultivate, and retain outstanding nursing talent.

To address issues such as nursing staff shortages, excessive working hours, and heavy workloads, NCKU Hospital collaborated with the “Cognitive Multimedia IC Design Laboratory” led by professors from the Department of Electrical Engineering at National Cheng Kung University. Together, they introduced smart technologies to clinical settings. Utilizing AIoTBR technology and the ChatGPT language model, the team developed a medical service robot and smart system equipped with eight major functions. The application areas include ward navigation, meal delivery logistics, drug identification, interactive dialogue with patients, and contactless physiological measurement services. These systems can be operated via computer or mobile platforms, offering both practicality and flexibility.

The smart robot and related application systems were implemented and field-tested in the 8A surgical ward of NCKU Hospital for over a year. Results showed that with smart technology assistance, the average daily time nurses spent on specific tasks dropped significantly from 100 minutes to under 33 minutes. Care efficiency improved more than threefold, and overall user satisfaction exceeded 90%.

As the trend of declining birthrates and aging continues, relying solely on young labor to support elderly care is no longer sustainable. The introduction of smart service robots provides the medical team with stable and effective support, not only enhancing care quality but also contributing to the sustainable development of the healthcare field.



Image / Introduction of Smart Service Robots

2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
C2-1 Employee Satisfaction Percentage	❶ Departmental employee satisfaction survey response rate reaches 70%	❶ Hospital-wide employee satisfaction survey response rate: 76.26%	O
	❷ Employee satisfaction percentage ≥ 90%	❷ Employee satisfaction: 88.7%	X
	❸ Satisfaction percentage on fatigue management among medical staff ≥ 85%	❸ Satisfaction percentage on fatigue management among medical staff: 83.6%	X

6.1.3 Salary and Benefits

Compensation Policy

As a leading public medical center in Taiwan, NCKU Hospital upholds the principles of openness, fairness, and impartiality in establishing a comprehensive employment and compensation system. This system is based on the “Civil Servant Performance Evaluation Act,” the “Evaluation Guidelines for NCKUH Contracted Staff,” the “Guidelines for the Issuance of Year-End Bonuses for Military, Civil, and Teaching Staff,” and the “Implementation Guidelines for Incentive Bonuses for Hospitals Affiliated with National Universities under the Ministry of Education.” Salaries for civil servants (contracted attending physicians follow the same standards) comprise base pay, professional allowances, service incentives, and specialty duty bonuses. For contracted staff, salary scales for various job categories are set with reference to market rates and adjusted accordingly. Both civil servants and contracted staff receive annual pay raises and promotions based on performance evaluations. In addition, profit-sharing bonuses are issued depending on the Hospital’s operational status. The Hospital also complies with government policy by increasing the minimum wage and provides license bonuses or job stipends for specialized talent, as well as increased night shift stipends, retention bonuses, and long-service bonuses. The compensation system is continuously reviewed and optimized based on operational needs. The Hospital is committed to establishing a fair, reasonable, and competitive compensation and benefits system, with a comprehensive welfare framework covering health promotion, work-life balance, parenting support, recreational activities, and retirement care, thereby supporting employees’ needs at all life stages, enhancing well-being and organizational cohesion, and cultivating a workplace culture of sustainable prosperity.

The ratio of the annual total compensation of the highest-paid individual at the Hospital to the median of the annual total compensation for all other employees is approximately 11.88 times, a decrease of 1.69 times compared to the previous year. The ratio of standard salaries of entry-level female and male staff to the local minimum wage (NTD 27,470 in 2024) is 1.

Ratio of the annual total compensation of the highest-paid individual at the Hospital to the median of the annual total compensation of all employees (excluding the highest-paid individual)	11.88
Percentage increase in the annual total compensation of the highest-paid individual compared to the median of the annual total compensation of all employees (excluding the highest-paid individual)	-1.69

Note：

❶ Due to a promotion to a faculty physician position, part of the salary of the highest-paid individual in 2024 was paid by the University headquarters, resulting in a -12.04% change in total compensation. Additionally, due to annual raises and promotions, the median percentage increase in total compensation for other employees was 7.14%.

Employee Salary Statistics Table

By Job Category Salary Proportion	Number of People		Average Annual Salary (NTD)		Salary Ratio	
	Male	Female	Male	Female	Male	Female
Managerial Staff	80	117	2,994,767	1,777,487	1.68	1
Non-Managerial Staff	1,214	3,636	1,627,294	877,754	1.85	1

Note:

❶ The male-to-female pay ratio (annual salary ratio) is calculated as: "Average annual salary of males in the category / Average annual salary of females in the category."

❷ The number of “Managerial Staff” includes “Senior Executives.”

❸ Different managerial levels are assigned different pay scales. Among them, there are 18 female and 62 male first-level managers who also serve as physicians, which results in higher average annual total compensation for males.

Comprehensive Employee Well-being

NCKU Hospital promotes career development plans, employee care initiatives, and retirement preparation support. These mechanisms help employees balance work and life, creating an attractive and sustainable career environment. This approach enhances overall organizational cohesion and long-term retention, embodying the core values of sustainable development for a healthcare institution.

Employee Benefits at NCKU Hospital

abor Protection and Retirement Plans	Various Performance and Service Incentive Bonuses	Special Duty Bonus	Year-end Bonus
	Profit-sharing Bonus	Operating Bonus	Variable Compensation such as Holiday Gifts Issued by Individual Units
	Occupational Insurance	Flexible Working Hours and Diverse Shift Arrangements	Health Examination
	Provision of Breastfeeding (Pumping) Time	Chronic Disease Risk Assessment	Prevention of Illnesses Caused by Abnormal Workload
Employee Life and Career Development	Educational Training	Overseas Study for Official Purposes	National Travel Card Subsidy
	Birthday Gift Allowance (NTD 2,000/year)	Employee Travel Subsidy	Holiday Parking Privileges for Employees
	Employee Cooperative Dividend		
Physical, Mental, and Spiritual Health Promotion	Weight Management	Smoking Cessation	Healthy Diet Promotion
	Chronic Disease Prevention	Preventive Screenings	Vaccination and Physical Fitness Promotion
	Free Psychological Counseling	Online Psychological Consultation	Recreational and Group Activities
	Health and Fitness Clubs (Softball Club, Badminton Club, Health Dance Club, etc.)		

Image / Employee Travel

Image / Employee Fitness Assessment Competition

Image / Body Composition Analyzer Test

Image / Grip Strength Test

Image / Exercise Guidance

Image / Rongyuan Lawn Music Market

NCKU Hospital provides staff dormitories, sports and recreational facilities, parking lots, and scheduled shuttle buses. It is also equipped with on-duty rest areas, designated nursing rooms, a hair salon, and a laundry service to support employees' daily needs. Additionally, the Hospital collaborates with businesses at Minsheng Plaza to offer exclusive discounts for staff and provides access to group purchasing through cooperatives and special store offers to help reduce living expenses.

In terms of medical care, employees are entitled to waived registration fees, discounts on ward charges, and partial self-paid medical services, with preferential health check-up rates for themselves and their immediate family members. To promote physical and mental well-being as well as work-life balance, the Hospital regularly organizes staff trips, holiday events, and club subsidies. Art exhibitions and ticket discounts are also promoted to encourage participation and enrich workplace life.

Employee Care

NCKU Hospital provides employees with appropriate channels for feedback, psychological support and counseling mechanisms, and mental health education to help alleviate stress during difficult times. The Hospital has established a procedure for employee care and consolation. Upon receiving a care-related report, the supervisor of the relevant department conducts immediate care, followed by case intake by the Employee Care Support Team. If the employee requests psychological counseling, the Department of Psychiatry provides assistance according to the Employee Mental Health Counseling Service Procedure. All care cases are reviewed and followed up in quarterly meetings of the Care Support Team.

In addition, the Hospital has established comprehensive workplace support resources, including assistance with job adaptation, accessible facilities, human resources consultation, and psychological support services. A designated contact point is also available to handle related matters, ensuring that employee needs are promptly addressed and properly managed. Through the integration of internal resources and institutional support, the Hospital promotes equal employment and social inclusion, enabling all employees to grow and thrive in a safe and respectful workplace. The designated contact points are as follows.

Multiple Support Measures

Unit	Description
Personnel Office	Employee Care Reporting
	Sexual Harassment Complaint
Occupational Safety and Health Office	Workplace Unlawful Infringement
	Abnormal Workload
	Employee Assistance Program – Happiness Hotline
	Employee Feedback Platform – Cheng Kung Window
Department of Psychiatry	Employee Psychological Counseling
Legal Affairs Office	Legal Consultation, Medical Disputes, Litigation Cases
	Legal Consultation, Medical Violence
Happiness Hotline	Multifaceted support to assist employees in evaluating, addressing, or resolving work-related difficulties

Promotion of Maternal Health Protection Policy for Workers

NCKU Hospital has established an Employee Assistance Program (EAP) and formed a dedicated EAP team to provide medical, legal, psychological counseling, and welfare resources. Each year, three free psychological counseling sessions and online consultations are offered to support employees in coping with workplace stress, occupational injuries, family matters, and maternity care. The Hospital also encourages continuing education by offering thesis incentive awards and has established public service selection pathways to support employees' career development and well-being enhancement.

Year	2022			2023			2024		
Gender / Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Number of Employees Eligible for Parental Leave Without Pay in the Year A	106	503	609	99	488	587	93	473	566
Number of Employees Who Actually Applied for Parental Leave Without Pay in the Year B	6	258	264	13	265	278	9	258	267
Number of Employees Scheduled to Return from Parental Leave Without Pay in the Year C	3	133	136	10	145	155	6	138	144
Number of Employees Who Actually Returned from Parental Leave Without Pay in the Year D	2	87	89	8	86	94	5	80	85
Number of Employees Who Returned from Parental Leave Without Pay in the Previous Year E	3	58	61	2	87	89	8	86	94
Number of Employees Who Continued Working for One Year After Returning from Parental Leave Without Pay in the Previous Year F	2	53	55	2	81	83	8	81	89
Parental Leave Without Pay Return Rate in the Year % (D/C)	66.67%	65.41%	65.44%	80.00%	59.31%	60.65%	83.33%	57.97%	59.03%
Parental Leave Without Pay Retention Rate in the Year % (F/E)	66.67%	91.38%	90.16%	100%	93.10%	93.26%	100%	94.19%	94.68%

Secure Childcare, Happy Journey Begins

NCKU Hospital is committed to creating a family-friendly workplace that supports employees in balancing work and family responsibilities. A nursery center has been established to provide professional childcare services for employees' children aged 0 to 2. In 2024, approximately 60 infants and toddlers were enrolled in the nursery center. Additionally, the Hospital has signed agreements with contracted nursery centers to offer employees discounted tuition rates, easing the financial burden on families and reducing commuting stress, enabling staff to focus on their work with greater peace of mind.

In the future, the Hospital will continue expanding accessibility and diversity of childcare resources by entering into agreements with more contracted service providers. At the same time, it will eliminate concerns among employees that applying for parenting benefits might negatively affect performance evaluations or promotion prospects. The Hospital will enhance supervisors' awareness of work–life balance and offer flexible work arrangements and emotional support in routine or emergency situations. These concrete actions aim to enhance employee happiness and strengthen their sense of commitment to the organization.

Image / Tainan City Private NCKUH Nursery Center

6.1.4 Assisting Career Development

Strengthening Professional Advancement and International Learning Support

In response to the rapidly changing medical environment and patient needs, NCKU Hospital has established a comprehensive hospital-wide training program based on the "Basic Employee Education and Training Program" and the "Holistic Care Education and Training Program." This initiative actively promotes the concept of holistic care, cultivating employees with the capability to provide integrated and patient-centered services grounded in compassion and humanistic concern.

To encourage lifelong learning and enhance workplace competitiveness, in-service staff are provided with systematic general training across seven major categories: General Humanities and Administrative Education, Information Security and Personal Data Protection, Medical General Knowledge, Healthcare Quality and Patient Safety, Infection Control, Emergency and Disaster Response, and First Aid Training. These programs comprehensively strengthen employees' professional competencies and response capabilities. In addition, the Hospital offers diverse learning channels through in-person courses and digital learning platforms to accommodate different learning preferences and schedules.

NCKU Hospital convenes employee education and training meetings every six months to regularly track course satisfaction, completion rates, and implementation effectiveness. An overall satisfaction and needs assessment survey is conducted at the end of each year. To ensure effective execution, the Hospital adopts the PDCA cycle and Kirkpatrick Model to systematically evaluate and continuously improve the training courses.

Through diversified and structured learning methods, employees' professional knowledge, clinical skills, and interdisciplinary communication and collaboration abilities are effectively enhanced. With a continuously optimized training mechanism, the Hospital is committed to improving overall care quality and delivering medical services that are safe, compassionate, and rooted in holistic concern for every patient. A summary of training programs is provided in the table below:

NCKU Hospital Education and Training

Category	New Employees	Current Employees
Onboarding / Orientation Training	Digital learning courses required at the time of reporting, covering hospital regulations, professional skills, occupational safety, humanities, administration, information security, general medical knowledge, infection control, and emergency response, to facilitate rapid adaptation.	Not exclusive to the onboarding stage, but relevant general content is included in the Basic Education and Training Courses.
Basic Education and Training Courses	Some content overlaps with onboarding training and belongs to general foundational knowledge.	Required to complete annually according to designated hours, covering seven categories: humanities and administration, information security and personal data, general medical knowledge, healthcare quality and patient safety, infection control, emergency and disaster response, and first aid training.
Nurse Training / Professional Development	Includes a two-year comprehensive training program for new nurses to develop basic clinical skills and care quality, with progress tracking and counseling.	Includes clinical nurse professional development courses, competency cultivation and advanced system planning, cross-specialty nursing training, and holistic care instructor training to support skill enhancement and professional growth.
Advanced Professional Training	Not a priority during the early stage, but available as career develops.	Designed for various professional fields (medical, administrative, technical), including updates in medical technology, advanced nursing education, and healthcare information security management.

成大醫院教育訓練		
Category	**New Employees**	**Current Employees**
Management and Leadership Training	Not applicable.	Provided for mid- and senior-level managers, covering hospital management, team leadership, and crisis management.
Licensing and Professional Certification Courses	Not applicable during the early stage; intended for later career development.	Supports employees in obtaining various professional licenses (e.g., advanced nursing, medical technologist, radiologic technologist), enhancing competitiveness.
Occupational Safety and Health Education	Basic safety training required at the time of reporting to build safety awareness and protective knowledge.	Annual re-education based on job type and risk level, with diverse courses covering operational safety, hazard prevention, first aid, and regulations.
Holistic Care Education and Training	Not specifically designed for new employees.	Targets all employees to develop holistic care capabilities, with courses addressing physical, psychological, spiritual, social, and team aspects.
Diverse Learning Methods	Emphasizes digital learning during the initial stage.	Offers in-person courses (internal training, workshops, seminars), online learning (digital platforms, recorded and live sessions), and encourages/ subsidizes academic exchanges and domestic/overseas study.

NCKU Hospital Education and Training

Item/Category		Managerial Staff		Non-Managerial Staff	
Unit/Gender		Male	Female	Male	Female
Total Number of People	Persons	170	149	1,049	3,465
Total Training Hours	Hours	7,455	7,757	33,102	113,248
Average Training Hours	Hours/Person	43	52	31	32

Image /2024 Pre-employment Training for New Employees – Employee Care and Sexual Harassment Prevention

Image / Special Lecture on Sexual Harassment Prevention

Image / New Employee Orientation

Image / In-Service Education and Training

Image /Occupational Safety and Health Education and Training


Image / Life, Humanities, and Administrative Education Training Courses

Image / Transformation of Medical Quality Monitoring and Practical Application of BI

Image / Clinical Instructor Workshop

Image / Faculty Teaching Enhancement Workshop


Image / Life, Humanities, and Administrative Education Training Courses

Employee Retirement System and Implementation Status

NCKU Hospital handles employee pension contributions and retirement matters in accordance with the Civil Servant Retirement, Severance, and Compensation Act, the Labor Standards Act, and the Labor Pension Act. The Hospital places high importance on the quality of life and career transition for retired employees. In addition to encouraging retired employees to participate in in-hospital volunteer training programs to maintain social connections, comprehensive retirement planning and support measures are provided. The Hospital also holds retirement financial and career planning courses from time to time to help employees understand pension planning, insurance, and investment management.

For employees approaching retirement or career change, the Hospital offers re-employment and skill transition training, such as developing them into medical consultants or educational instructors to continue their professional value and contribution. Senior retired personnel may be rehired for short-term assignments depending on talent cultivation and operational needs, enabling knowledge transfer and sustainable organizational development.
The Hospital also offers health management courses and psychological counseling services to continuously monitor the physical and mental well-being of employees, helping them transition smoothly into retirement life.

Additionally, NCKU Hospital provides care and recognition for retired employees through Lunar New Year gifts, medical privileges, and commemorative retirement coins.

6.2 Friendly Workplace

Human Rights Protection

As a public medical center, NCKU Hospital adheres to the principle of administration according to law, fully complying with international human rights protection regulations such as the International Covenant on Civil and Political Rights, the International Covenant on Economic, Social and Cultural Rights, the Convention on the Elimination of All Forms of Discrimination Against Women, the Convention on the Rights of Persons with Disabilities, and their enforcement acts. In accordance with relevant government laws and regulations, the Hospital has formulated various internal policies and measures to protect the rights and safety of patients, visitors, and all employees.

Image / NCKU Hospital Personnel System – Announcement of Relevant MeasuresTraining

Regarding medical infection control, the Infection Control Center has established the "Infection Control Measures for Companions and Visitors" and the "Infection Control Measures for Employee Health Protection," aiming to strengthen infection management, enhance employee health protection, and ensure patient safety. These measures are announced via the attendance system and are actively promoted by medical units or nursing stations to the public. Hospital staff may also stay updated on professional knowledge through ongoing education courses.

To safeguard the occupational health and employment rights of hospital personnel, the Hospital has formulated the “Employee Rights Policy,” which covers various aspects including the prohibition of employment discrimination, workplace safety and hygiene, reasonable working hours, gender equality, employment protection for indigenous peoples and persons with disabilities, collective bargaining, and grievance mechanisms. The aforementioned policies are communicated through multiple channels, including the Knowledge Management System, announcements on the Personnel System bulletin board, and the official webpage of the Personnel Office, enabling employees to clearly understand their applicable rights and the content of related systems.

In terms of occupational safety and health, the Hospital has established the “Labor Safety and Health Office” in accordance with the Occupational Safety and Health Act to conduct risk assessments, work monitoring, health services, and training. The Occupational Safety and Health Committee is convened regularly to review the effectiveness of policy implementation. In response to potential violence or inappropriate behavior in the medical environment, NCKU Hospital adopts a “zero tolerance” approach and has formulated the “Prevention Plan for Unlawful Infringement During Duty Execution,” which includes complaint and investigation mechanisms and provides psychological and legal support to ensure protection for employees. An implementation plan is formulated annually for this policy, and the work code is revised every three years to strengthen employees’ awareness and response capabilities.

6.2.1 Gender Equality

Regarding gender equality, the Hospital has formulated the “Guidelines for the Prevention, Complaint, and Investigation of Workplace Sexual Harassment” and relevant operating procedures. The Hospital actively promotes gender equality policies and establishes a clear complaint and review mechanism for the prevention of sexual harassment, ensuring that employees can work in a friendly and respectful environment. The policy content and procedures are made publicly available.

Image / Key Amendments to the Three Gender Equality Laws and Case Studies on Sexual Harassment Prevention

To strengthen advocacy and prevention, the Hospital has set up a “Sexual Harassment Prevention” section on its official website, providing complaint channels, relevant regulations, measures, and form templates. A smooth and confidential complaint mechanism has also been established, enabling employees to report inappropriate behavior with peace of mind. All reports are investigated and handled with due care.

In addition, the Hospital regularly holds special lectures and workshops on sexual harassment prevention. These include topics such as gender awareness, analysis of the 2024 amendments to the three Gender Equality Acts, and case studies, with the goal of continually improving employees’ awareness and sensitivity toward sexual harassment prevention and jointly fostering a safe and equitable work environment.

Image / Website Gender Equality Section

Image / Handbook for Promoting a Gender-Friendly Workplace

The Hospital’s management team centers its strategic objectives around five major dimensions: Customer, Internal Processes, Learning and Growth, Financial, and Social Responsibility. Through the Balanced Scorecard framework, the Hospital formulates short-, mid-, and long-term development plans, which are jointly revised in alignment with National Cheng Kung University’s medium-term institutional goals.In addition to enhancing medical quality and efficiency, the development plan also incorporates elements such as human rights, environmental sustainability, and social engagement. Related policies and their scope of application are communicated through various internal and external channels, including official announcements, employee ID cards, posters, new employee training, supervisor workshops, as well as the Hospital’s official website and social media platforms.

In addition, the Hospital has issued a “Written Statement on the Prohibition of Unlawful Infringement in the Workplace,” signed by the Superintendent, clearly declaring a zero-tolerance stance against workplace violence, sexual harassment, and bullying. This statement applies to management, general employees, and visitors alike, ensuring the physical and mental safety and dignity of all staff while performing their duties.

6.2.2 Prevention of Medical Violence

Zero Tolerance for Medical Violence

In response to potential incidents of physical, psychological, or verbal violence, sexual harassment, and other forms of misconduct within medical settings, NCKU Hospital adopts a zero-tolerance policy. The Hospital has established a “Prevention Plan for Unlawful Infringement During Duty Execution,” along with clear complaint channels and handling procedures. Through advocacy and training, the implementation of a reporting system, and the formation of investigative teams, the Hospital actively addresses incidents of unlawful infringement involving employees, while providing psychological counseling and legal assistance to safeguard the rights and psychological support of both complainants and respondents. Additionally, the Hospital enhances staff capacity in responding to violent incidents by regularly conducting conflict communication and self-protection training, and by organizing anti-violence drills and strengthening equipment in high-risk units.

Unlawful Infringement Drills

In accordance with Article 324-3 of the Regulations for Occupational Safety and Health Facilities, NCKU Hospital has established the “Prevention Plan for Unlawful Infringement During Duty Execution.” The Hospital conducts at least one training session and risk assessment annually, and employees are required to complete various checklists to ensure workplace safety. In the event of an unlawful infringement, employees may report through a dedicated hotline or email. The Occupational Safety Office will carry out a confidential investigation and provide necessary health counseling and work-related assistance.

The Hospital requires supervisors of all departments to publicly declare the “Prohibition of Workplace Unlawful Infringement” on a regular basis and to post the statement in a prominent location within their units. All related meeting minutes, training content, reporting records, and handling outcomes must be properly documented and preserved as a basis for risk assessment and improvement.

For complaints filed, the Hospital has established an Investigation Committee to conduct confidential investigations and provide protective measures for complainants, including safeguarding their personal information and prohibiting the disclosure of any data that could identify them. Meanwhile, whistleblowers shall not be subjected to any form of disadvantage due to their reporting behavior, such as dismissal, removal from duty, demotion, salary reduction, or infringement of their legal rights. During the investigation, any form of unlawful harm is strictly prohibited. The Hospital also offers, when necessary, compensatory support measures such as health guidance, job adjustment or reassignment, and mental health follow-ups. In 2024, no incidents of discrimination occurred at the Hospital, demonstrating its strong commitment to fair employment and equal treatment.

6.3 Workplace Safety and Health

6.3.1 Occupational Safety and Health System

To promote and implement occupational safety and health initiatives, the Hospital has established the Occupational Safety and Health Management Guidelines in accordance with the Occupational Safety and Health Act and other relevant regulations. The occupational safety and health management practices referred to in these Guidelines encompass various management measures designed to prevent occupational accidents, maintain radiation safety within the hospital premises, ensure environmental quality and hygiene, safeguard personnel safety and health, and create a comfortable working environment. However, the Hospital has not yet obtained occupational safety-related certifications such as ISO 45001 or TOSHMS, but plans to implement them in the future.

The occupational safety and health responsibilities of each relevant unit of the Hospital are as follows:

Unit Name	Responsibilities and Duties
Occupational Safety and Health Committee	Responsible for deliberating, studying, coordinating, and advising on matters related to occupational safety and health throughout the Hospital.
Radiation Protection Management Committee	Responsible for hospital-wide management tasks related to the prevention of radiation hazards.
Infection Control Committee	Responsible for hospital-wide infection control, prevention, and investigation tasks.
Occupational Safety and Health Office	Responsible for formulating, planning, supervising, and promoting safety and health management matters.
Department of Family Medicine	Responsible for conducting pre-employment physical examinations for new employees and periodic health checkups for current employees of the Hospital.
Department of Occupational and Environmental Medicine	Responsible for conducting special health examinations.
General Affairs Office	Responsible for hospital-wide disaster response-related tasks.
Maintenance and Engineering Office	Responsible for hospital-wide fire protection-related tasks.

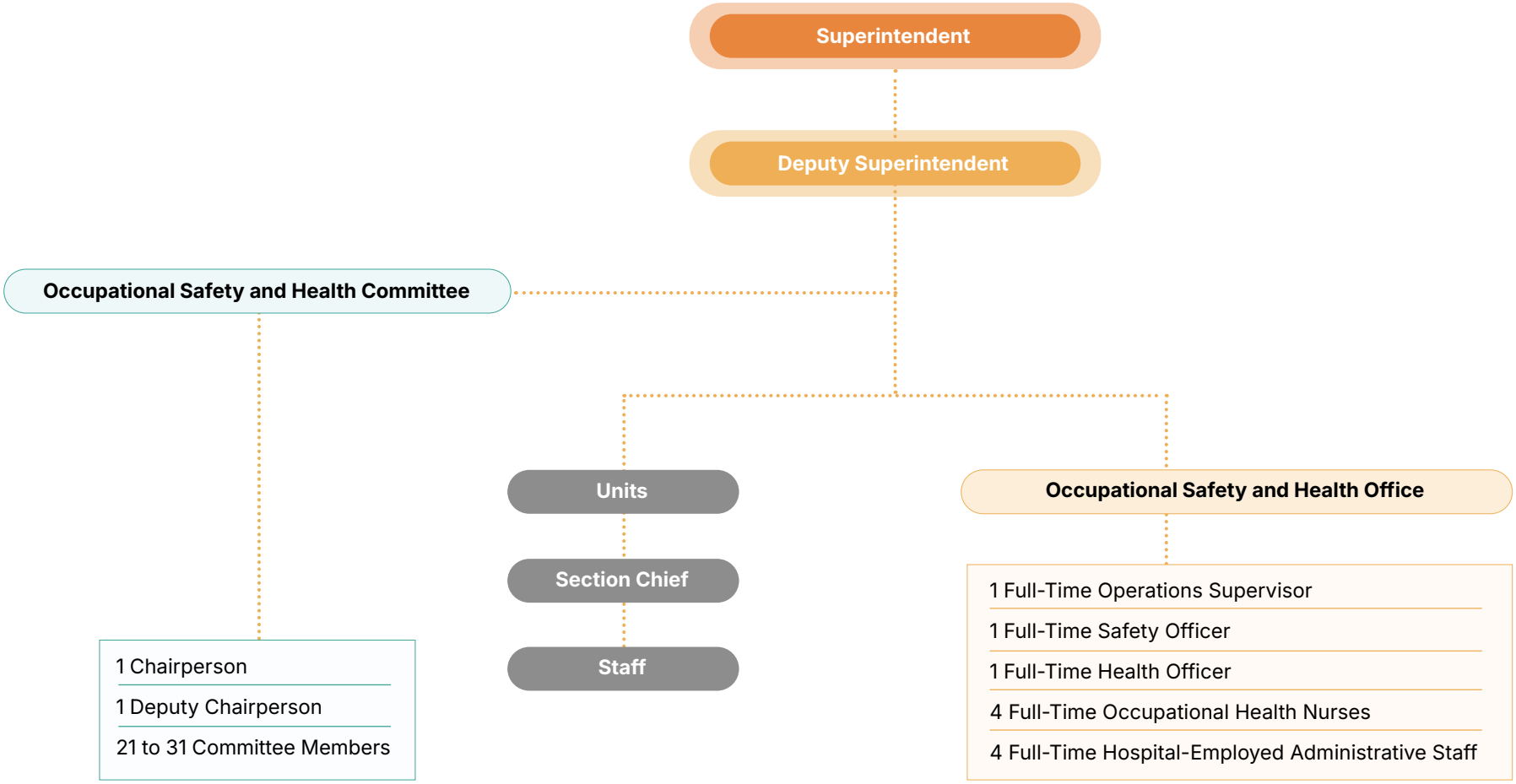
Unit Name	Responsibilities and Duties
Department of Emergency Medicine	Responsible for the management of emergency medical services and response to mass casualty incidents, toxic chemical substances, and biological warfare agents within the Hospital.
First-Level Units	Responsible for implementing occupational safety and health management tasks related to their respective departments.

Occupational Safety and Health Committee

To comprehensively promote workplace safety and health management, NCKU Hospital has established a robust system and process in accordance with relevant regulations, and has formed the Occupational Safety and Health Committee. The Committee is chaired by a Vice Superintendent, with one Deputy Chairperson concurrently served by another Vice Superintendent appointed by the Superintendent, and includes one Executive Secretary. Members consist of supervisors from various units, occupational safety and health personnel, related engineering and technical personnel, medical and nursing personnel providing labor health services, and labor representatives. Currently, the Committee comprises 21 members, including 7 labor representatives and 14 employer representatives, with labor representatives accounting for 33% of the total membership. The Committee holds meetings quarterly to jointly deliberate, coordinate, plan, and make decisions with the management on occupational safety and health-related issues. Its duties include deliberating, studying, coordinating, and advising on matters related to occupational safety and health throughout the Hospital.

To ensure the workplace safety and health of all personnel, NCKU Hospital has established a comprehensive safety and health management mechanism for contractors. All contractors are required to comply with the “Contractor Safety and Health Management Manual” and adhere to infection control and related hygiene regulations to ensure that operations meet the Hospital's safety standards. In addition, a hazard communication and risk assessment mechanism is implemented based on the operational risks. Through the signing of the “Contractor Operational Safety and Health Affidavit,” the Hospital strengthens the identification and control of potential risks. Meanwhile, the Occupational Safety and Health Office regularly convenes contractor coordination meetings to communicate and exchange information on safety policies, regulatory advocacy, occupational incident case analyses, and improvement of deficiencies. These efforts effectively enhance contractors’ awareness and professionalism regarding safety and health, thereby improving overall operational safety quality and cooperation efficiency.

Organizational Structure



Training and Education

To enhance employees' professional competencies and workplace safety awareness, NCKU Hospital has established the "In-service Personnel Training Program." Based on different job categories and levels of occupational risk, the Hospital plans and implements annual continuing education courses. The training content covers topics such as occupational safety and health, infection control, and emergency response, ensuring that employees possess up-to-date knowledge and response capabilities, thereby improving overall medical quality and workplace safety. The training items for various job categories and risk levels are as follows:

Statistical Table of Occupational Safety and Health Training Items

Training Item Name	Number of Trainees	Training Cost (NTD)
Other Safety and Health Education and Training (including training for contractors, various departments, intern physicians, pre-employment training for new physicians, pre-employment training for new nursing staff, in-service personnel, and ad hoc training for personnel assisting in workplace operations)	92,885	1,248,203
Safety and Health Education and Training for Supervisors of Hazardous Operations and Operators of Dangerous Machinery and Equipment	141	228,900
Safety and Health Education and Training for New Employees and In-service Personnel	984	26,000
Education and Training for In-service Contractors	712	0
Volunteer Participation in Safety and Health Education and Training	234	0

2024 In-service Personnel Training Program

Course Title	Course Duration
Full-Body Simple Stretching Exercises – Enhancing Stretching Efficiency Using Readily Available Equipment	One hour
Basic Mat Core Exercises	One hour
N95 Respirator Fit Testing for Clinical High-Risk Units, Department of Nursing	One hour
Prevention of Unlawful Infringement During Duty Execution	Ten hours
Occupational Safety and Health Education and Training – Occupational Safety and Health Committee	One hour
Defensive Driving Concepts and Accident Handling Procedures	Two hours
Hazardous Chemicals Classification Management	Two hours
Practical Training on Risk Assessment	Two hours
Smart "Picky Eating" for Healthy Weight Loss	Two hours
A Brief Discussion on the Occupational Safety and Health Act – The 5 Major Plans	Two hours
Labor Insurance Occupational Accident Rights and Common Questions on Occupational Injury and Disease Determination	Two hours
What to Do When Health Check Results Are Abnormal	Two hours
Protection for High-Risk Personnel (Climate Risk, Middle-Aged and Elderly, Respiratory Protection)	Two hours





Image / Occupational Safety and Health Education and Training

Our hospital's occupational safety and health courses combine in-person training with an online learning system to ensure that all personnel in the workplace can successfully complete the training. Course content is tailored according to job risks and responsibilities, with regular assessments of training effectiveness and needs. We continuously improve educational resources, striving to create a safe, healthy, and efficient medical work environment. In 2024, a total of 94,956 participants, including contractors, received occupational safety training, with training expenses amounting to NT$1,503,103.

6.3.2 Safe Working Environment

Occupational Safety Risk Assessment

NCKU Hospital incorporates all work activity areas, including locations, zones, equipment, and both routine and non-routine operations, into the scope of occupational safety and health management. The management targets not only include all hospital employees but also all external vendors, contractors, and non-employee workers operating within the hospital premises. The management coverage rate is 100%, ensuring that all work activities comply with safety regulations.

Statistical Table of Occupational Safety and Health Training Items

Category	Item	2022	2023	2024
Number of Deaths Caused by Occupational Diseases	Number of Female Deaths (Cases)	0	0	0
	Number of Male Deaths (Cases)	0	0	0
	Total Number of Deaths (Cases)	0	0	0
Number of Recordable Occupational Disease Cases	Total Number of Occupational Disease Cases in Females	0	1	0
	Total Number of Occupational Disease Cases in Males	0	0	0
	Total Number of Occupational Disease Cases	0	1	0
Mortality Rate Caused by Occupational Diseases		0	0	0
Recordable Occupational Disease Rate		0	1.19	0

Note:
❶ Occupational Disease Rate = (Total Number of Occupational Diseases / Total Worked Hours) \ 1,000,000.
❷ Mortality Rate Caused by Occupational Diseases = (Number of Deaths Caused by Occupational Diseases / Total Worked Hours) \ 1,000,000.
❸ Recordable Occupational Disease Rate = (Number of Recordable Occupational Diseases / Worked Hours) \ 1,000,000.
❹ Occupational disease incidence among non-employees in the past 3 years is zero.

Occupational Accident Handling and Follow-Up

To effectively identify and manage occupational safety and health risks involved in operations, NCKU Hospital has established the “Hazard Identification, Risk Assessment, and Determination of Control Measures Standard.” This standard systematically identifies and assesses various hazards that may arise in the work environment and personnel activities, including physical, chemical, biological, and ergonomic hazards, to plan reasonable and feasible control measures that reduce safety and health impacts on employees, contractors, and related third parties. All operations undergo annual risk assessments according to this standard, and the implementation status is reported quarterly to the Occupational Safety and Health Committee.

In 2024, the hospital identified a total of 41 high-risk operations, of which 38 have been improved, achieving a risk improvement completion rate of 92.7%, demonstrating the hospital’s determination to continuously enhance safety management effectiveness. Regarding occupational accident incidents, the hospital has also established the “Work Guidelines (including Employee Accident Prevention Measures),” the “Occupational Accident Handling and Investigation Standard,” and the “Guidelines for Employee Occupational Accident Condolences and Medical Subsidies” as the basis for accident handling and subsequent care. After an incident occurs, the hospital immediately initiates an investigation, records relevant information, and reports to the Occupational Safety and Health Committee for case-by-case discussion and deregistration as a basis for continuous improvement.

Various safety management measures are implemented in the hospital’s high-risk areas, including safety inspections and environmental monitoring. The Occupational Safety and Health Committee convenes regularly to review and follow up on the implementation of automatic inspections, establish an incident reporting and investigation mechanism, and analyze the causes of occupational accidents to effectively prevent recurrence. Specific measures include having the supervisor of the incident unit attend the Occupational Safety and Health Committee to discuss and review case reports. For accident causes, such as presentations on cuts or falls, improvement measures are discussed and, upon committee approval, the cases are deregistered. Accident prevention measures are announced quarterly for public awareness.

In 2024, the hospital reported no cases of occupational disease, reflecting concrete results in workplace health promotion, hazard prevention, and occupational risk management, and also demonstrating the institution-wide emphasis and effort on employee health protection.

Statistical Table of Employee Occupational Injuries in the Past Three Years

Category	Item	2022	2023	2024
Total Work Hours	Total Work Hours for Female Employees	7,905,467	7,861,589	8,159,302
	Total Work Hours for Male Employees	2,361,373	2,348,267	2,437,194
	Total Accumulated Work Hours	10,266,840	10,209,856	10,596,496
Number of Deaths Caused by Occupational Injuries	Number of female deaths	0	0	0
	Number of male deaths	0	0	0
	Total number of deaths	0	0	0
Number of Serious Occupational Injuries (Excluding Deaths)	Total Number of Serious Occupational Injuries in Females (Cases)	1	1	1
	Total Number of Serious Occupational Injuries in Males (Cases)	0	0	0
	Total Number of Serious Occupational Injuries (Cases)	1	1	1
Recordable Occupational Injuries (including Number of Fatalities and Number of Serious Occupational Injuries)	Total Number of Occupational Injury Cases in Females	29	10	15
	Total Number of Occupational Injury Cases in Males	0	0	0
	Number of Occupational Injury Cases	29	10	15
Mortality Rate Caused by Occupational Injuries		0	0	0
Serious Occupational Injury Rate		0.10	0.10	0.09
Recordable Occupational Injury Rate		2.82	0.98	1.42

Note:

❶ Mortality Rate Caused by Occupational Injuries = (Number of Deaths Caused by Occupational Injuries / Total Accumulated Work Hours) \ 1,000,000

❷ Serious Occupational Injury Rate = (Number of Serious Occupational Injuries (excluding deaths) / Total Accumulated Work Hours) \ 1,000,000

❸ Recordable Occupational Injury Rate = (Number of Recordable Occupational Injuries (including deaths and serious injuries) / Total Accumulated Work Hours) \ 1,000,000

❹ Serious occupational injuries refer to those that prevent recovery of health within six months.

❺ Recordable occupational injuries do not include occupational injuries caused during commuting to and from work.

2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
C3-2 Completion Rate of Preliminary Response to Employee Suggestions Within the Timeliness (Within 4 Hours)	After the " Cheng Kung Window " receives an employee suggestion, it immediately notifies the case acceptance and submission to the responsible unit supervisor via email or phone. The unit provides an explanation or preliminary response within 4 hours.	100%	O

6.3.3 Employee Health Management

NCKU Hospital values employee health and workplace safety, clearly requiring new hires to complete the corresponding category of physical examination according to their job nature before starting work. Through the annual health check system, the hospital continuously monitors employee health status. Based on the examination results, four dedicated health service nurses provide individualized health follow-up and management services, assisting with work condition adjustments when necessary to prevent occupational diseases. Additionally, the hospital's interdisciplinary professional team, including the Departments of Family Medicine, Occupational and Environmental Medicine, Nutrition, and the Labor Safety Office, jointly analyzes health check results to plan and promote various health promotion activities, continuously creating a safe, healthy, and friendly workplace environment.

2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
C3-1 Promotion of Healthy Workplace Activities	Promote at Least One Healthy Workplace Activity	◉ Employee Physical Fitness Testing Competition ◉ 80 participants, 77 completed, completion rate 96%. ◉ Overall satisfaction score: 4.5. ◉ Body fat percentage decreased from a pre-test average of 32.5% to 31.3%. ◉ In 2024, 32 employee cases applied for psychological counseling referrals.	O

Employee Health Check

The hospital currently has 5,047 employees, of whom 355 engage in operations with special health hazards. According to Article 3 of the Labor Health Protection Regulations, the hospital has assigned one dedicated employee health service physician and four dedicated employee health service nurses responsible for employee health management and protection. New hires must complete a physical examination before starting work based on the nature of their department. The examination targets include general employees and special operations workers to ensure workplace health and operational safety.

For current employees, the primary health check targets in 2024 are civil servants aged 40 and above, all personnel aged 65 and above, and special operations workers. Health checks are conducted in accordance with the Labor Health Protection Regulations, with special attention to those engaged in work involving special health hazards such as ionizing radiation, lead, noise, dust, formaldehyde, and manganese. This also includes personnel in dietary services, ethylene oxide, dialysis rooms, environmental management, laboratories, and chemotherapy operations, who undergo regular health checks. The hospital's health check items exceed regulatory requirements. For example, employees over 40 receive additional tests including a full blood count, hepatitis B surface antigen and antibody, hepatitis C virus antibody, Serum Glutamic Oxaloacetic Transaminase (SGOT), total bilirubin, uric acid, limb blood flow and pressure measurement, electrocardiogram, fecal occult blood test, and abdominal ultrasound, fully demonstrating the hospital's commitment to employee health and protection.

In 2024, 900 new hires completed physical examinations with a 100% completion rate. Additionally, health checks for current employees also reached a 100% completion rate, reflecting the hospital's high emphasis and implementation of employee health maintenance.

Image / Employee Health Check

Summary Table of Employee Health Check Numbers and Costs

General Health Checkup	
Examination Items	Health Checks for Ethylene Oxide Operators, Health Checks for Blood Dialysis Operators, Health Checks for Environmental Management Operators, Health Checks for Nutrition Department Dietary Operators, Health Checks for Chemotherapy Operators, Health Checks for Laboratory Personnel at Biosafety Level 2 or Above
Number of Examinees (Persons)	1,386
Examination Cost (Thousands of NT$)	2,921.96
Special Health Checkup	
Examination Items	Personnel Engaged in Lead, Noise, Dust, Formaldehyde, Manganese, and Ionizing Radiation Operations
Number of Examinees (Persons)	355
Examination Cost (Thousands of NT$)	694.96

Note：

❶ The primary health check targets in 2024 are civil servants aged 40 and above, all personnel aged 65 and above, and special operations workers.

❷ New hires are counted based on the actual number who reported to the Labor Safety Office and completed the physical health examination; this does not include those who hanged their status.

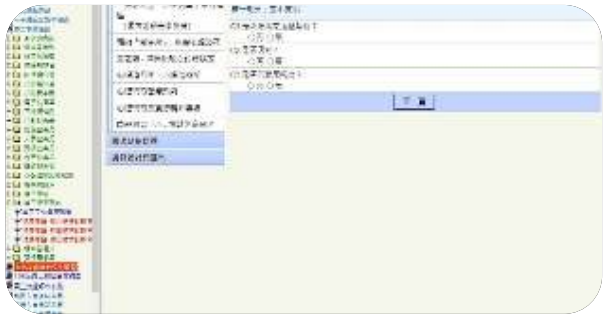
Employee Support and Workplace Health Protection

Our hospital implements job redesign through multiple channels to assist employees in evaluating work processes. By integrating resources from administrative units, the training center, and the foundation, customized job redesign services are provided based on employees' actual conditions. This includes improving the work environment, equipment, and conditions, providing assistive devices, and adjusting work methods to enhance safety and efficiency. In 2024, a total of 8 employees were served, with 7 undergoing job redesign and 1 receiving psychological reinforcement training.

Additionally, the hospital has established a dedicated "Cheng Kung Window" employee suggestion platform with a dedicated hotline as an open communication and feedback channel. Combined with the abnormal workload-induced disease prevention program, the hospital proactively and comprehensively assesses employees' workload conditions, implements risk grading management, respects employee privacy and autonomy, and provides individual health education and necessary referrals. In 2024, 1,755 employees were assessed, of whom 33 were recommended for further interviews. On-site health guidance was provided 33 times, and on-site physician consultations occurred 3 times.

Regarding employee care, the hospital has established clear procedures for employee care and condolences. Upon receiving reports of various care cases, the supervisor of the involved unit immediately provides care, and the Employee Care Assistance Team takes charge of case handling. If employees require psychological counseling, the Psychiatry Department provides assistance following the mental health counseling service procedures. The Care Team meets quarterly for ongoing care and follow-up, demonstrating the hospital's continuous attention to and care for employees' physical and mental well-being.

Image/ Workload Interview



Image/ Employee Workload Questionnaire Human Resources System Interface

Image/ Cheng Kung Window Poster

Chapter

7

ENVIRONMENTAL SUSTAINABILITY AND TECHNOLOGY FOR NET ZERO

7 Environmental Sustainability and Technology for Net Zero

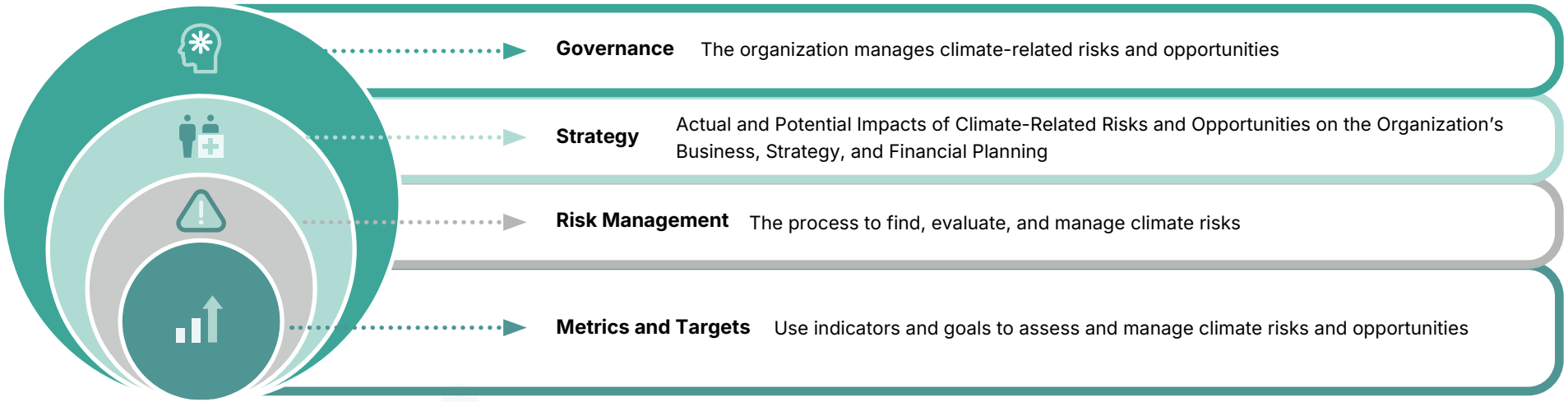
7.1 Climate Action

7.1.1 Climate Risk Assessment

In the context of escalating global climate change and extreme weather events, healthcare institutions, as highly energy-consuming and resource-intensive organizations, bear an undeniable responsibility. According to the carbon footprint report by Health Care Without Harm, the healthcare industry accounts for approximately 4.4% of global greenhouse gas emissions, with 30% of emissions from Scope 1 and Scope 2 direct greenhouse gas emissions, and 70% from Scope 3 emissions. If considered as a country, it would rank as the fifth largest emitter globally. Hospitals are not only places for safeguarding public health but should also take action to fulfill their commitment to environmental sustainability.

NCKU Hospital has adopted the Task Force on Climate-Related Financial Disclosures (TCFD) framework as an important tool to grasp climate risks and opportunities, serving as a systematic basis for identifying, assessing, and managing climate risks and opportunities.

Core Elements of Climate-Related Financial Disclosures



Material Topic	National Cheng Kung University Hospital's Alignment with the TCFD Framework
Governance	◉ The hospital's management team and supervisory team hold joint meetings quarterly as a principle. These meetings focus on policies and regulations related to hospital sustainable development, as well as the review and supervision of sustainability management goals. ◉ The Sustainability Management Committee leads, together with the Risk Management Committee, interdisciplinary meetings every 2–3 years to identify major climate risks and opportunities. The implementation results are regularly reported to the hospital's management and supervisory teams.
Strategies	The Sustainability Management Committee conducts financial impact assessments of risks and opportunities based on scenario assumptions. The scenario descriptions are as follows: **Transition Risks** International Energy Agency (IEA) ❶ STEPS (Stated Policies) Scenario at 2.5°C ❷ NZE (Net Zero Emissions) Scenario at 1.5°C **Physical Risks** ❶ Taiwan Climate Change Projections (TCCIP) (AR6) SSP1-2.6 and SSP5-8.5 scenarios (sea level rise and inundation) ❷ Taiwan Climate Change Projections (TCCIP)(AR6) SSP1-2.6 and SSP5-8.5 scenarios – County/City Climate Change Overview 2024 Basic Version (annual longest consecutive dry days) ❸ National Science and Technology Center for Disaster Reduction – Climate Change Disaster Risk Maps (hazard vulnerability)

Risk Category

Risk Types	Risk Issues	Risk Description	Response Plan and Financial Impact Assessment
Transition Ris	Regulations - Carbon Fees and 2050 Net-Zero Emissions Policy	The medical center has been included as a carbon-emitting organization required to conduct emissions inventory and registration starting in 2025, and will face carbon fee levies from the Ministry of Environment in the future. At the same time, it will also comply with the net-zero policy to achieve phased carbon reduction targets, which will inevitably lead to a significant increase in operating costs.	◉ The hospital plans to implement ISO 14001 Environmental Management System, ISO 14064-1 Greenhouse Gas Inventory, and ISO 50001 Energy Management System in the future, with external verification costs exceeding 2.5 million NT dollars. ◉ Based on the 2024 electricity emission factor and an assumed price of 7,000 NT dollars per renewable energy certificate, the cost of reducing carbon by every 100 tons is approximately 1.48 million NT dollars.
	Market - Rising Raw Material Costs	Fossil fuels will gradually be banned, and future energy costs will increase significantly.	◉ Over the past four years, electricity rates have increased by an estimated average of about 10% annually. The hospital will actively promote energy-saving projects within the facility and phase out large equipment with poor energy efficiency.

Material Topic	National Cheng Kung University Hospital's Alignment with the TCFD Framework

Opportunity Category

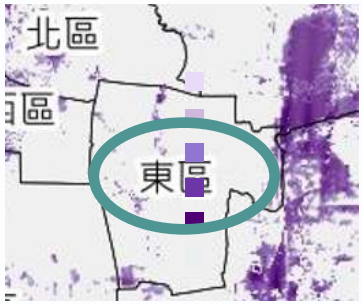
Risk Types	Risk Issues	Risk Description	Response Plan and Financial Impact Assessment

Physical Risk

According to the downscaled data from AR6 of the Taiwan Climate Change Projection Information and Adaptation Knowledge Platform (TCCIP), the longest consecutive dry period is estimated to be about 76 days by the year 2100. Currently, the inpatient building's daily water usage is approximately 1,000 tons (off-peak) to 1,600 tons (peak), so during a water outage, the hospital's stored water can last about 3 to 4 days; the outpatient building's average daily water usage is 168 tons, so during a water outage, stored water can last about 2 to 3 days. Based on Tainan City's water rationing policy of five days water supply and two days cut-off, the assessment shows no water shortage risk. If external water sources are needed, the purchase cost is approximately 1,000 NT dollars per ton.

Longest number of dry days in a year				
Base period	Level of global warming			
	1.5°C	2°C	3°C	4°C
58.9 days	+2.3 days -7.1 ~ 11.8 days	+2.5 days -9.1 ~ 14.6 days	+4.7 days -6.2 ~ 14.6 days	+5.0 days -6.0 ~ 17.1 days

As for the flood risk assessment, simulations from the Climate Change Disaster Risk Map (Hazard Vulnerability) indicate that by 2100, the hospital is not located in a flood alert zone; flood risk is also not among the hospital's top five risks. The campus has adequate drainage measures and sufficient property insurance coverage, so significant financial impacts are not expected.



Legend

Level 1
Level 2
Level 3
Level 4
Level 5
Not included in statistical analysis

Note：The higher the level, the greater the hazard–vulnerability.

Material Topic	National Cheng Kung University Hospital's Alignment with the TCFD Framework

Risk Management

The hospital's risk management system is implemented based on hazard and HVA methods, including the following management systems:

- Annual execution of HVA risk ranking, listing the top five disasters under control.
- Formulation of 21 sub-plans with annual review and revision.
- Activation of the HICS disaster command system for response and coordination.
- Regular tabletop simulations and night field drills.
- The Risk Management Committee supervises implementation quarterly.

Metrics and Targets

Management Items	Annual Goals
Extreme Climate Risk Identification and Control	100% Annual update of HVA risk assessment completed, achievement rate 100%
Emergency Response Capability Drills	At least 5 interdisciplinary drills completed annually
Safe Operation of Critical Facilities	Monthly inspections conducted once, functional drills conducted once every six months
Disaster Downtime Control	Downtime for a single disaster is less than 3 hours
Recovery Timeliness	Complete restoration of main functions within 72 hours
Included in Operational Planning	Over 50% of major equipment replacements included in climate risk assessment

Financial Impact

- The hospital's Sustainability Development Committee was established only at the end of 2024, and related operations are still in the initial planning stage. Currently, there are no concrete quantitative results regarding potential risks, opportunities, and financial impacts brought by climate change. In the future, a systematic evaluation framework will be established from a holistic perspective, and through processes of gradually identifying key issues, in-depth data analysis, confirming impact levels, and continuous review, to enhance the accuracy of climate-related management and decision-making.

7.1.2 Net Zero Strategy

Carbon Reduction Plan

In response to Taiwan's 2050 net-zero emissions policy, the Ministry of Health and Welfare actively promotes hospital carbon reduction actions and collaborates with the Ministry of Environment and Ministry of Economic Affairs to promote carbon inventory and energy-saving renovations. NCKU Hospital takes the lead in responding to government policies, signing the "Hospital Sustainability Development Initiative" with the Taiwan Sustainable Energy Research Foundation at the end of 2024, committing to actively transform in areas such as smart healthcare, energy conservation and carbon reduction, and green operations.

In 2025, the YouBike Carbon Reduction Savings APP will be promoted, combining digital tools with sustainable actions to encourage hospital staff to practice environmental protection with low-carbon tools. As of the end of April, 272 responses to the activity have been recorded, reducing 310.8 kilograms of CO_2, showing significant results. The EasyCard Corporation also proactively contacted the hospital regarding the EasyCard Green Points Program, which is expected to integrate environmental sustainability and green consumption cycles into various lifestyle aspects of employees including food, clothing, housing, transportation, education, and entertainment, combining efforts from industry, government, and academia to deeply embed sustainability throughout the hospital.

In the second half of 2025, besides planned extension cord reduction activities, the hospital will inventory extension cord quantities and examine the need for electrical outlet installations. This will not only improve electricity usage habits but also reduce carbon emissions. It also responds to the Ministry of Environment's Green Office initiative, encouraging each unit to self-inspect their office environments based on various green environmental indicators and conduct self-checks.

7.2 Building a Green Hospital

Material Topic	Sustainable Environmental Management
Importance	◉ As a major consumer of resources, the hospital exerts significant environmental impacts through water, electricity, refrigerant air conditioning, various energy uses, waste disposal, and air quality monitoring. Promoting sustainable environmental management is not only a social responsibility for the hospital but also a duty. Besides improving medical quality and safeguarding patient safety, the hospital is committed to reducing operating costs through sustainable environmental management, enhancing workplace well-being, and protecting the health of patients and staff.
Influence and Impact	Positive / Actual / Governance: Through replacing or procuring energy-efficient equipment, waste classification and recycling, and promoting plastic reduction and vegetarian diets, reduce energy consumption and waste disposal costs, lowering operating expenses. Positive / Actual / Social: In response to the construction of the Geriatric Hospital and Shalun Hospital, drive the development of low-carbon green buildings, low-carbon building materials and equipment industries, encourage medical energy-saving technologies, and promote industries and employment opportunities in biodegradable medical materials. Negative / Potential / Governance: Initial implementation of low-carbon buildings, energy-efficient buildings, green building standards, and low-carbon building materials requires high investment, increasing operating costs. Negative / Potential / Environmental: Pharmaceuticals and infectious waste require special treatment and are produced in large quantities; improper handling may pollute air, water sources, and the working environment.
Policies	◉ In accordance with relevant government laws and regulations, in 2025 the Sustainability Development Committee will formulate and promote related policies through regular meetings.
Strategies	◉ Promote smart healthcare to reduce resource consumption and greenhouse gas emissions. ◉ Implement telemedicine.

Material Topic	Sustainable Environmental Management		
Goals & Objectives	**Short-Term Goals (2025–2026)** ◉ Achieve a 1% waste reduction compared to 2024. ◉ Achieve a 1% electricity savings compared to 2024. ◉ Send personnel to participate in ISO 14064-1 training courses and related seminars, and Sustainability Manager training courses and related seminars. ◉ Promote the YouBike Carbon Reduction Savings APP, combining digital tools with sustainable actions to encourage hospital staff to practice environmental protection with low-carbon tools.	**Mid-Term Goals (2027-2030)** ◉ Pass ISO 14064-1 verification. ◉ Implement ISO 50001 Energy Management System. ◉ Introduce digital AI medical transformation and promote medical carbon reduction plans. ◉ Savings APP, combining digital tools with sustainable actions to encourage hospital staff to practice environmental protection with low-carbon tools.	**Long-Term Goals (Post-2030)** ◉ Reduce carbon emissions by 30% by 2030.implementation plans.
Management Evaluation Mechanism	◉ Hold hospital affairs meetings and medical meetings once a month to discuss related business with the hospital director. ◉ The Sustainability Office holds a monthly meeting to jointly formulate strategic sustainability development goals and project implementation plans.		
Performance and Adjustment	◉ Replaced lighting equipment, chillers, and elevators, saving a total of 1,344,743 kWh of electricity, reducing approximately 637 tons of CO_2e. ◉ In 2024, the recyclable reuse rate of resource reuse waste was 21.56%. ◉ In 2024, the total electricity savings amounted to approximately 1,344,743 kWh, reducing about 637,408.18 kilograms of CO_2, equivalent to the carbon emissions of 1.6 Daan Parks.		

7.2.1 Energy Management

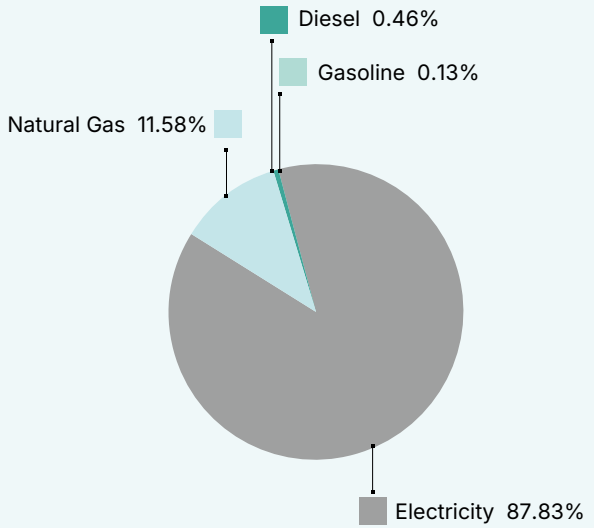
In 2024, National Cheng Kung University Hospital's energy consumption totaled 239,203.56 GJ, with electricity as the major energy source accounting for 87.85% of total energy, followed by natural gas at 11.58%. The higher energy intensity in 2024 compared to 2023 is due to the easing of the pandemic, recovery of medical capacity, and continuous operation of facilities.

No greenhouse gas inventory was conducted in 2024, so no related information is available. The inventory process has begun, with plans to disclose 2024 and 2025 data in the next report, and complete third-party verification by 2026.

Energy Consumption Statistics for the Past Three Years

Quantitative Indicators	Unit	2022	2023	2024
Electricity Consumption	kWh / year	61,792,411	47,736,270	58,358,630
	L / Year	222,452.68	171,850.57	210,091.07
Gasoline Consumption	Year	NA	9,649.32	9,795.27
	GJ	NA	315.12	312.05
Diesel Consumption	L / Year	20,000.00	12,260.67	30,322.00
	GJ	702.91	431.20	1,097.12
Consumption	m^3	763,354.00	769,598.00	827,103.00
	GJ	25,550.99	25,777.22	27,703.32
Total Energy Consumption	GJ	248,706.58	198,374.11	239,203.56
Organization-Specific Metrics	Floor Area (m^2)	209,149.30	209,149.30	209,149.30
Energy Density	GJ / m^2	1.19	0.95	1.14

Proportion of Energy Consumption in 2024 (GJ)



Note:

❶ Electricity heat value conversion: 1 kWh = 0.0036 GJ.

❷ Conversion coefficients calculated based on the Ministry of Environment's Greenhouse Gas Emission Factor Management Table version 6.0.4 fuel heat value, gasoline: 7,800 kcal/L; diesel: 8,400 kcal/L; natural gas: 8,000 kcal/m^3; 1 kcal = 4.1868 kJ.

❸ Energy intensity = Total energy consumption (GJ) / Floor area (m^2).

❹ Gasoline was not recorded in 2022, so related data is unavailable.

❺ Floor area: Outpatient Building 65,806.55 m^2, Inpatient Building 112,860 m^2, Medical and Nursing Building 27,673.05 m^2, Mechanical and Electrical Center 2,809.70 m^2.

Implementation of Real-Time Monitoring System

NCKU Hospital, to implement energy management and net-zero emission policies, has actively introduced a real-time energy monitoring system in recent years to enhance the visualization and intelligent management of energy use. Through the real-time monitoring system, NCKU Hospital can immediately grasp the electricity consumption status of each building and major energy-consuming equipment, perform trend analysis, anomaly alerts, and efficiency evaluations, effectively improving the proactivity and accuracy of energy management.

Energy Saving and Carbon Reduction Achievements

To move towards a green hospital, NCKU Hospital has improved energy use efficiency through equipment replacement and implemented sustainable development goals for medical institutions. In 2024, NCKU Hospital significantly upgraded lighting equipment and air conditioning cooling systems to effectively reduce overall electricity consumption.

To enhance the lighting system efficiency in the hospital area, NCKU Hospital completely replaced old lamps in 2024, converting them into high-efficiency LED panel lights, with a total of 2,642 units replaced, weighing 196,168 kilograms. It is estimated that about 559,370 kWh of electricity can be saved annually, providing bright and safe lighting for the medical environment while effectively reducing daily electricity demand.

Regarding the refrigeration and air conditioning system, NCKU Hospital participated in the Ministry of Economic Affairs' "Commercial Service Industry System Energy Saving Subsidy Program," replacing two old chillers on campus with advanced magnetic levitation chillers. The magnetic levitation compressor, featuring non-contact operation, low noise, and high efficiency, can greatly improve cooling efficiency and stability while reducing energy loss.

These two equipment upgrades are estimated to save about 785,373 kWh of electricity annually, significantly improving the operation efficiency of the hospital's cooling system throughout the year. Through these two measures, NCKU Hospital can save a total of about 1,344,743 kWh of electricity annually, reducing approximately 637 metric tons of CO_2 (Note: coefficient used is 0.474 kg CO_2e/kWh based on 2024 electricity factor), equivalent to the carbon emissions of 1.6 Daan Parks.

2024 Annual Execution Results of Strategic Objectives

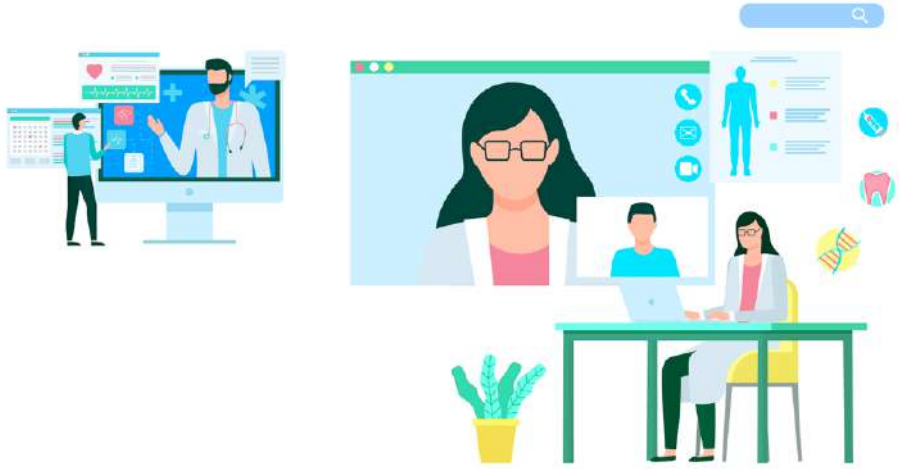
Item / Objective	Annual Goals	Implementation Status	Target Achievement
S3-3 Energy Saving Measures	Planned replacement of 2,000 light fixtures in 2024	Replacement of 2,642 light fixtures	O

7.2.2 Improving Medical Processes

Reducing Medical Waste Generation

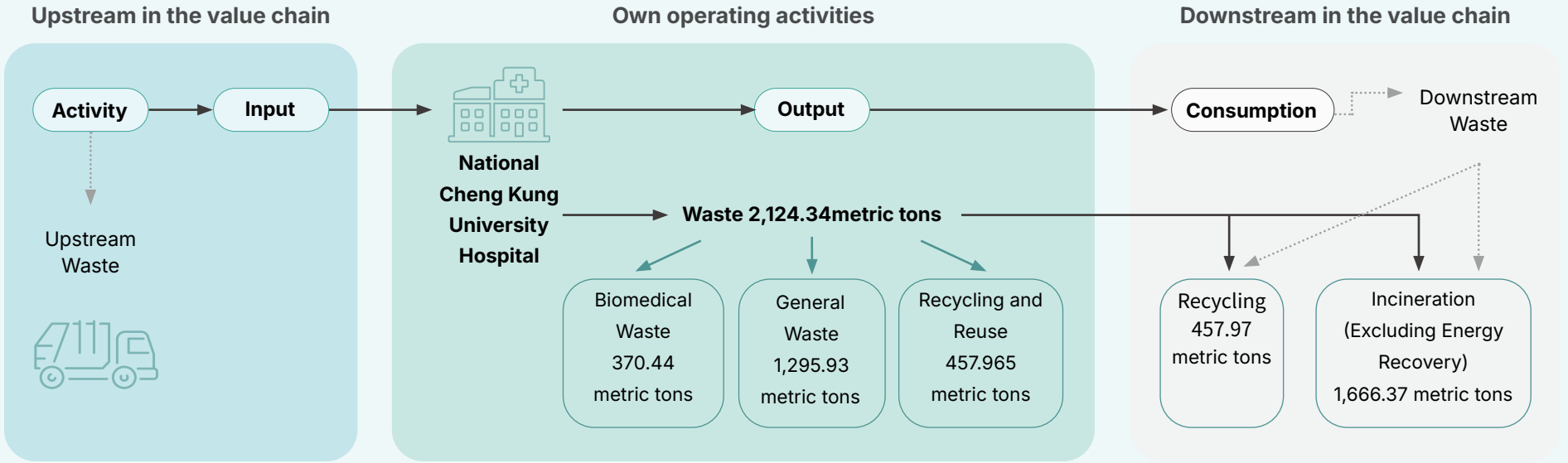
In 2024, NCKU Hospital generated a total of 2,124.34 metric tons of waste during operations, mainly divided into two categories. The first category is non-hazardous waste, including general garbage and recyclable resources. General garbage is handled by qualified environmental contractors and sent to the incinerator owned by Tainan City Government for processing. Recyclable waste is entrusted to organizations licensed by the Environmental Protection Bureau or recyclable waste treatment businesses. The recycling rate for recyclable waste is 21.56%, demonstrating the hospital's preliminary achievements in resource recycling. The second category is hazardous industrial waste, specifically biomedical waste. The hospital requires waste collection vendors to hold Class A or higher waste disposal permits and to use vehicles, tools, and procedures compliant with the Environmental Protection Department's "Standards for Storage, Removal, and Treatment Methods and Facilities of Industrial Waste" for collection and transport. The waste is then transported to incinerators or melting furnaces approved by the Environmental Protection Department for incineration treatment.

NCKU Hospital values both upstream and downstream segments of the value chain. It reduces environmental burdens upstream through source reduction and green procurement measures, while actively cooperating with downstream waste handlers to ensure legality and environmental compliance in waste treatment.



Waste Statistics Table

Composition of Waste	Hazardous / Non-hazardous	Exit	
Item		Waste Generation (tons)	Treatment Method
General Waste	Non-hazardous Waste	1,295.93	Incineration (excluding energy recovery)
Resource Recycling and Reuse	Non-hazardous Waste	457.965	Recycling
Biomedical Waste	Hazardous Waste	370.44	Incineration (excluding energy recovery)



2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
S3-1 Waste Reduction and Recycling	10% (2023) Year 10% Reduction in Biomedical Waste Generation	13% Achieved, 13% Reduction in Biomedical Waste Generation	O

Carbon Reduction Benefits of Smart Technology

In the wave of rapid development in medical technology, digital transformation is not only a key strategy to improve medical quality and operational efficiency but also an important approach for medical institutions to fulfill their environmental sustainability responsibilities. As a leading medical center in southern Taiwan, NCKU Hospital upholds the core value of "patient-centeredness," actively promoting digital innovation by integrating artificial intelligence, big data analysis, and smart medical systems to enhance clinical decision support, optimize patient care processes, and comprehensively improve the quality of medical services.

At the same time, digital transformation also provides the medical system with an opportunity to move towards low-carbon sustainability. NCKU Hospital effectively reduces paper usage and energy consumption through measures such as paperless electronic medical records, cloud data integration, telemedicine services, and smart ward energy management, improving resource utilization efficiency and practicing the core concept of "smart is sustainable." These innovative applications not only optimize medical operation processes but also inject new momentum into environmental sustainability, demonstrating the possibility of concurrent medical service excellence and green governance.

7.2.3 Green Procurement

Procurement Policy

As a public institution, the hospital actively responds to the Ministry of Environment's promotion of green procurement policies. According to the "Government Procurement Act" and the "Regulations on Priority Procurement of Environmentally Friendly Products by Agencies," the hospital prioritizes purchasing products that meet green procurement standards, such as those with environmental labels, energy-saving labels, and water-saving labels, striving to enhance sustainable procurement performance.

The hospital actively implements a "leasing instead of purchasing" strategy to realize resource recycling and full lifecycle management of equipment. At present, consumables procurement and equipment leasing are concurrently adopted for devices including printers, copiers, and some testing equipment, to reduce resource consumption and waste generation caused by equipment purchase and replacement. There are also multiple advanced medical devices such as hemodialysis machines, peritoneal dialysis machines, radiotherapy systems, and robotic-assisted systems. This strategy not only aligns with the green procurement encouragement for leasing items but also demonstrates the hospital's concrete actions toward a circular economy and sustainable governance.

In the 2022 to 2024 green procurement performance evaluations, the hospital's "designated procurement items" achievement rates were 99.98%, 100%, and 100%, respectively; the total scores for the three years were 100 points, 95.1 points, and 99.3 points in sequence, continuously demonstrating a high standard of green procurement performance.

Beyond product selection, the hospital is also committed to paper reduction in the procurement process. It has fully implemented electronic requisition procedures for regular consumables and continues to promote "electronic invoice delivery" to reduce the printing demand for physical invoices, credit notes, and delivery notes, further simplifying the reimbursement process and reducing paper usage, moving toward low-carbon administrative operations.

Year	Green Procurement Amount	Designated Procurement Items Achievement Rate	Green Procurement Performance Evaluation Score
2022	NT$46,251,042	99.98%	100 points
2023	NT$33,031,217	100%	95.1 points
2024	NT$18,552,223	100%	99.3 points

Supplier Management

To ensure the quality of medical services and patient safety, NCKU Hospital strengthens procurement transparency and quality control through rigorous tender evaluation and contract regulations. Strict requirements mandate that suppliers and contractors comply with relevant regulations across the three ESG dimensions.

Tendering

Explanation

The hospital may require suppliers to provide inspection reports from the Ministry of Economic Affairs' Standards Inspection Bureau or other certified institutions. Green products such as environmentally friendly, energy-saving, water-saving, or green building materials provided by vendors must be reported on the “Private Enterprises and Organizations Green Procurement Reporting Platform” established by the Environmental Protection Administration, Executive Yuan, to actively support green procurement. Items such as "usage environmental requirements, environmental protection level," and "corporate green procurement reporting amount" are included in the scoring criteria to encourage suppliers to fulfill social responsibility and environmental concepts.

Example

When the Pharmacy Department procures intravenous drugs over 200cc, priority must be given to suppliers with environmental labels to reduce the environmental impact of medical procurement.

Contract Regulations

Explanation

It is 100% required that suppliers and contractors comply with the Labor Standards Act, Occupational Safety and Health Act, and Gender Equality in Employment Act, and must not discriminate based on gender, indigenous status, physical or mental disabilities, or vulnerable groups. During the contract period, vendors are required to maintain labor insurance, employment insurance, national health insurance, and contribute to labor retirement funds. For projects involving construction or installation, contractors must also purchase employer liability insurance. In case of breach of contract, the hospital may terminate or cancel the contract according to contractual provisions and list the offending vendors on the Government Procurement Network’s blacklist.

Example

Suppliers provide 100% of the relevant certification documents.

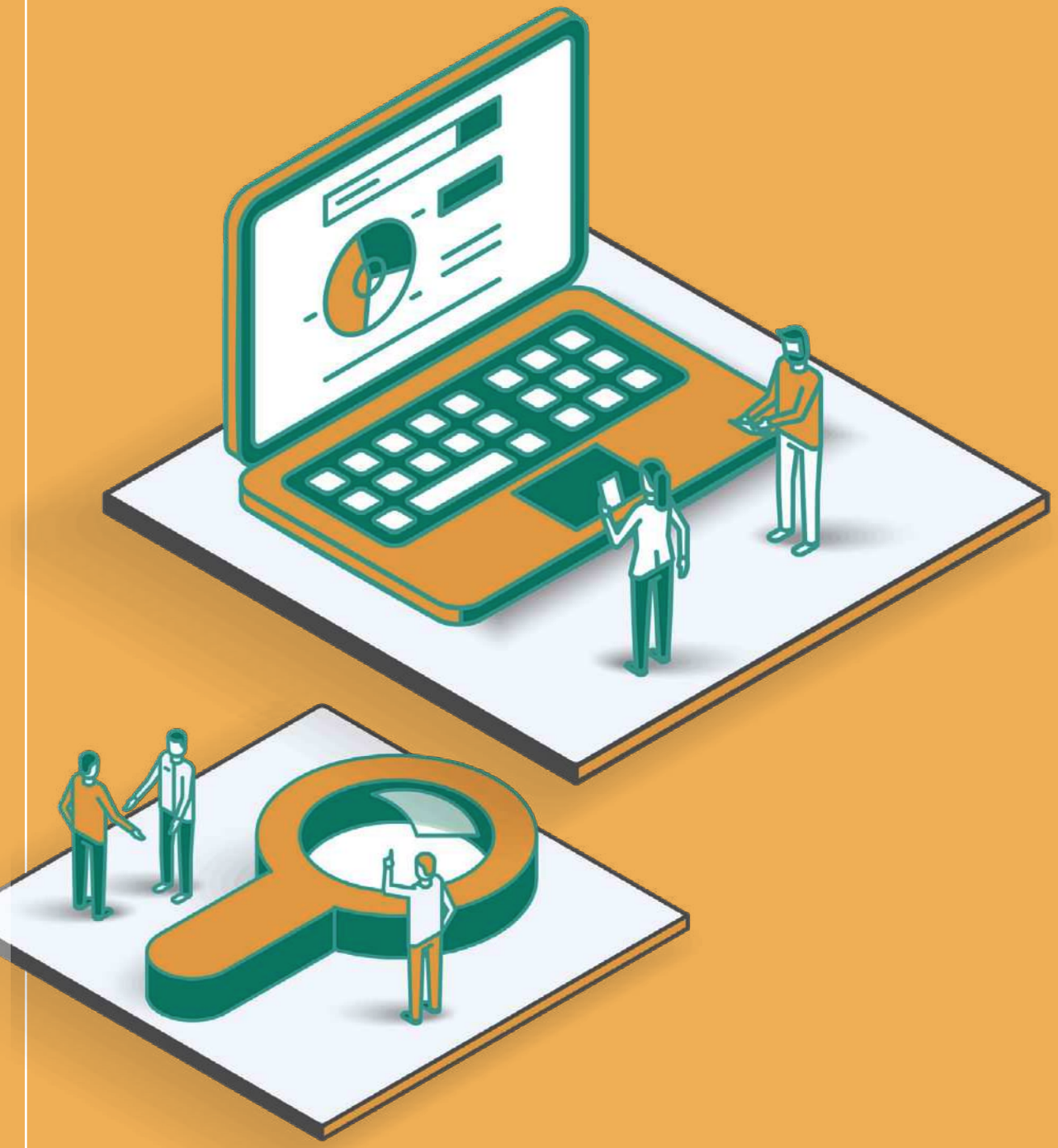
NCKU Hospital conducts procurement in accordance with the "Government Procurement Act" and related subsidiary regulations. For procurement cases exceeding NT$150,000, public tendering is the primary method. Suppliers must prioritize purchasing products with lower environmental impact and procure recyclable, low-pollution, energy-saving products bearing the Green Energy Label in accordance with the "Green Procurement Management Procedures." Selected suppliers and contractors are not listed as barred vendors by the Public Construction Commission of the Executive Yuan. In 2024, a total of 615 suppliers won bids under the "Government Procurement Act," with 100% sourced locally.

Year		2022		2023		2024	
Item		Number of Vendors	Amount	Number of Vendors	Amount	Number of Vendors	Amount
Project	Domestic	5	30,217,900	3	55,779,999	11	1,093,248,200
	Foreign	0	0	0	0	0	0
Financial	Domestic	448	77,439,817,882	497	380,491,869,547	483	140,315,752,392
	Foreign	2	1,822,790	1	221,382	0	0
Labor Services	Domestic	101	540,926,160	99	1,438,789,836	121	450,481,138
	Foreign	2	910,736	1	1,048,605	0	0
Total		558	78,013,695,468	601	381,987,709,369	615	141,859,481,730

Unit: NT$1,000

2024 Annual Execution Results of Strategic Objectives

Item / Objective	Annual Goals	Implementation Status	Target Achievement
S3-2 Green Procurement	❶ Property Section: Agency Green Procurement Performance Evaluation achieved 95% for the year ❷ Project Section: Over 70% of water-based cement paint and exposed mineral fiber ceiling tiles used were products with Green Building Material Labels	❶ Property Section: 100% for the year ❷ Project Section: 70% use of Green Building Material Label products	O



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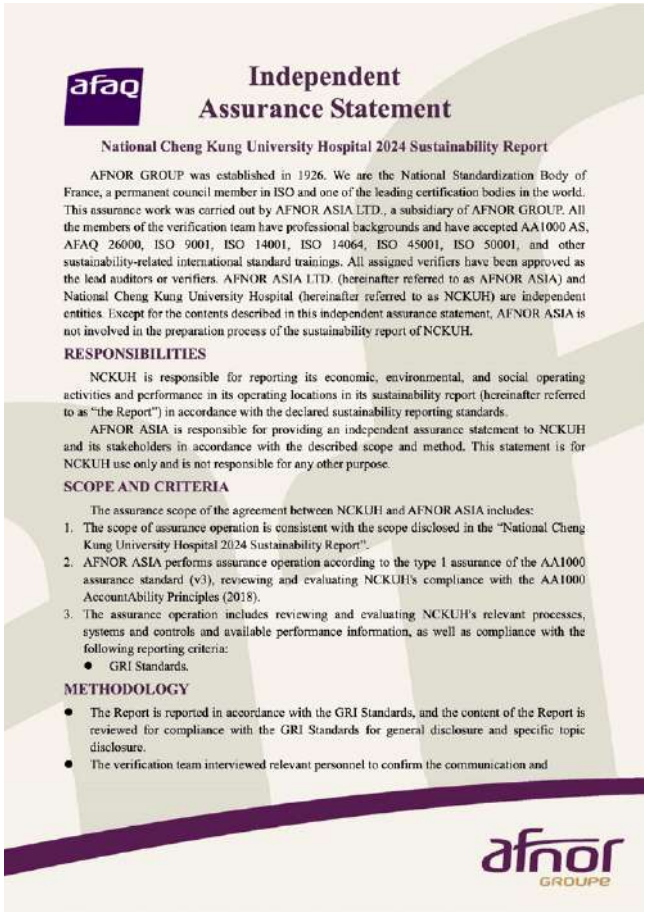
Chapter

APPENDIX

8 Appendix

8.1 Verification Statement



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Independent Assurance Statement

National Cheng Kung University Hospital 2024 Sustainability Report

AFNOR GROUP was established in 1926. We are the National Standardization Body of France, a permanent council member in ISO and one of the leading certification bodies in the world. This assurance work was carried out by AFNOR ASIA LTD., a subsidiary of AFNOR GROUP. All the members of the verification team have professional backgrounds and have accepted AA1000 AS, AFAQ 26000, ISO 9001, ISO 14001, ISO 14064, ISO 45001, ISO 50001, and other sustainability-related international standard trainings. All assigned verifiers have been approved as the lead auditors or verifiers. AFNOR ASIA LTD. (hereinafter referred to as AFNOR ASIA) and National Cheng Kung University Hospital (hereinafter referred to as NCKUH) are independent entities. Except for the contents described in this independent assurance statement, AFNOR ASIA is not involved in the preparation process of the sustainability report of NCKUH.

RESPONSIBILITIES

NCKUH is responsible for reporting its economic, environmental, and social operating activities and performance in its operating locations in its sustainability report (hereinafter referred to as "the Report") in accordance with the declared sustainability reporting standards.

AFNOR ASIA is responsible for providing an independent assurance statement to NCKUH and its stakeholders in accordance with the described scope and method. This statement is for NCKUH use only and is not responsible for any other purpose.

SCOPE AND CRITERIA

The assurance scope of the agreement between NCKUH and AFNOR ASIA includes:

1. The scope of assurance operation is consistent with the scope disclosed in the "National Cheng Kung University Hospital 2024 Sustainability Report".
2. AFNOR ASIA performs assurance operation according to the type 1 assurance of the AA1000 assurance standard (v3), reviewing and evaluating NCKUH's compliance with the AA1000 AccountAbility Principles (2018).
3. The assurance operation includes reviewing and evaluating NCKUH's relevant processes, systems and controls and available performance information, as well as compliance with the following reporting criteria:
   - GRI Standards.

METHODOLOGY

- The Report is reported in accordance with the GRI Standards, and the content of the Report is reviewed for compliance with the GRI Standards for general disclosure and specific topic disclosure.
- The verification team interviewed relevant personnel to confirm the communication and

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standards, improve the management content of material topics and the management performance of operating locations, and provide comprehensive and complete sustainable information to stakeholders.

ASSURANCE OPINION

AFNOR ASIA has developed a complete sustainability reporting assurance standard based on the verification guidelines of the AA1000 Assurance Standard (v3) and the GRI Standards. Based on the sufficient evidence provided by NCKUH and the facts seen during on-site verification, we adhere to the principle of fairness and issue a statement on the global sustainability reporting standards followed by the organization. In our opinion, the information and data presented in the Report by NCKUH provides a fair and balanced representation. We believe the focuses on economic, social, and environmental indicators in NCKUH in 2024 are well represented.

ASSURANCE LEVEL

In accordance with the AA1000 Assurance Standard (v3), we verified this assurance statement corresponding to a moderate level. The scope and methods are as described in this statement.

For and on behalf of AFNOR :

AA1000 Licensed Report 000-84/V3-HX56P

Dr. August Tsai
The Director for Certification and Assessment
Jul.24.2025
Verification team: Chung Pen Chen (Lead Verifier), YU TAI CHIANG (Verifier).
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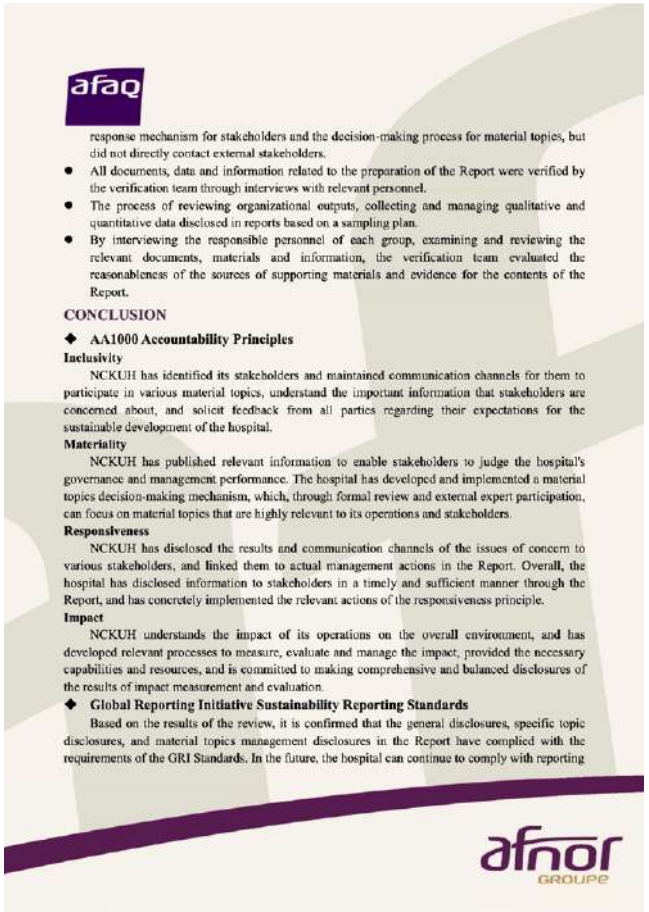

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response mechanism for stakeholders and the decision-making process for material topics, but did not directly contact external stakeholders.

- All documents, data and information related to the preparation of the Report were verified by the verification team through interviews with relevant personnel.
- The process of reviewing organizational outputs, collecting and managing qualitative and quantitative data disclosed in reports based on a sampling plan.
- By interviewing the responsible personnel of each group, examining and reviewing the relevant documents, materials and information, the verification team evaluated the reasonableness of the sources of supporting materials and evidence for the contents of the Report.

CONCLUSION

◆ **AA1000 Accountability Principles**

Inclusivity

NCKUH has identified its stakeholders and maintained communication channels for them to participate in various material topics, understand the important information that stakeholders are concerned about, and solicit feedback from all parties regarding their expectations for the sustainable development of the hospital.

Materiality

NCKUH has published relevant information to enable stakeholders to judge the hospital's governance and management performance. The hospital has developed and implemented a material topics decision-making mechanism, which, through formal review and external expert participation, can focus on material topics that are highly relevant to its operations and stakeholders.

Responsiveness

NCKUH has disclosed the results and communication channels of the issues of concern to various stakeholders, and linked them to actual management actions in the Report. Overall, the hospital has disclosed information to stakeholders in a timely and sufficient manner through the Report, and has concretely implemented the relevant actions of the responsiveness principle.

Impact

NCKUH understands the impact of its operations on the overall environment, and has developed relevant processes to measure, evaluate and manage the impact, provided the necessary capabilities and resources, and is committed to making comprehensive and balanced disclosures of the results of impact measurement and evaluation.

◆ **Global Reporting Initiative Sustainability Reporting Standards**

Based on the results of the review, it is confirmed that the general disclosures, specific topic disclosures, and material topics management disclosures in the Report have complied with the requirements of the GRI Standards. In the future, the hospital can continue to comply with reporting

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8.2 GRI Comparison Table

OPERATIONAL INDICATORS

「*」 indicates a major theme

GRI Standards / Topics		GRI Disclosure Content	Corresponding Chapter / Description	Page
GRI2: General Disclosure 2021				
01The organization and its reporting practices	2-1	Organizational Details	About NCKU Hospital	08
	2-2	Entities included in theorganization's sustain ability reporting	About This Report	04
	2-3	Reporting period, frequency, and contact point	About This Report	04
	2-4	Restatements of information	About This Report	04
	2-5	External assurance	About This Report	04
Activities and workers	2-6	Activities, value chain and other business relationships	About NCKU Hospital 4.3 Promoting Smart Healthcare	08 133
	2-7	Employees	6.1 Talent Attraction and Retention	158
	2-8	Workers who are not employees	6.1 Talent Attraction and Retention	158
Governance	2-9	Governance structure and composition	1.1 Governance and Supervision	32
	2-10	Nomination and selection of the highest governance body	1.1 Governance and Supervision	32
	2-11	Chair of the highest governance	1.1 Governance and Supervision	32
	2-12	Role of the highest governancebody in overseeing the management of impacts	1.1 Governance and Supervision	32
	2-13	Delegation of responsibility for managing impacts	1.1 Governance and Supervision	32

GRI Standards / Topics		GRI Disclosure Content	Corresponding Chapter / Description	Page
Governance	2-14	Role of the highest governance body in sustainability reporting	1.1 Governance and Supervision	32
	2-15	Conflicts of interest	1.2 Integrity Managemen	45
	2-16	Communication of critical concerns	1.2 Integrity Managemen	45
	2-17	Collective knowledge of the highest governance bod	none	-
	2-18	Evaluation of the performance of the highest governance body	none	-
	2-19	Remuneration policies	1.1 Governance and Supervision 6.1 Talent Attraction and Retention	32 158
	2-20	Process to determine remuneration	1.1 Governance and Supervision 6.1 Talent Attraction and Retention	32 158
	2-21	Annual total compensation ratio	6.1 Talent Attraction and Retention	158
Strategy, policies and practices	2-22	Statement on sustainable development strategy	Message from the Superintendent	
	2-23	Policy commitments	1.3 Risk Management 6.3 Workplace Safety and Health	51 183
	2-24	Embedding policy commitments	1.3 Risk Management 6.3 Workplace Safety and Health	51 183
	2-25	Processes to remediate negative impacts	1.3 Risk Management 2.3 Doctor-patient relationship 6.3 Workplace Safety and Health	51 81 183
	2-26	Mechanisms for seeking advice and raising concerns	1.2 Integrity Management 2.3 Doctor-patient relationship	45 81
	2-27	Compliance with laws and regulations	1.2 Integrity Management	45
	2-28	Membership associations	About NCKU Hospital	08

GRI Standards / Topics		GRI Disclosure Content	Corresponding Chapter / Description	Page
Stakeholder engagement	2-29	Approach to stakeholder engagement	Identification and Communication with Stakeholders	16
	2-30	Collective bargaining agreements	1.2 Integrity Management	45

GRI Standards / Topics		GRI Disclosure Content	Corresponding Chapter / Description	Page
GRI3: Material Topic Disclosure 2021				
Material Topic Disclosure	3-1	Process to determine material topics	Material Topics for Sustainable Development	24
	3-2	List of material topics	Material Topics for Sustainable Development	24

GRI Standards / Topics		GRI Disclosure Content	Corresponding Chapter / Description	Page
Material Topics				
Topic-specific standards: 200 Series (Economic Topics)				
*** Holistic and Integrated Care Doctor-Patient Relationship (Custom Topic), Social Participation**				
Doctor-Patient Relationship (Custom Topic), Social Participation	3-3	Management of material topics	3.1 Responding to a Super-Aged Society 3.2 Optimization of Pediatric Medical Care	98 112
GRI 203 Indirect Economic Impacts 2016	203-1	Infrastructure investments and services supported.		
	203-2	Significant indirect economic impacts		
GRI 413 Local Communities 2016	413-1	Operations with local community engagement, impact assessments, and development programs		
	413-2	Operations with significant actual or potential negative impacts on local communities	No actual or potential negative impacts on local communities	

GRI Standards / Topics		GRI Disclosure Content	Corresponding Chapter / Description	Page
Topic-specific standards: 300 Series (Environmental Topics)				
＊Sustainable Environmental Management				
GRI 3 Material Topics2021	3-3	Management of material topics	7.2 Building a Green Hospital	201
GRI 302 Energy 2016	302-1	Energy consumption outside of the organization	7.2 Building a Green Hospital	201
	302-2	Energy consumption outside of the organization		
	302-3	Energy intensity		
	302-4	Reduction of energy consumption		
	302-5	Reductions in energy require-ments of products and services		
GRI 306 Disclosure of Waste Topics 2020	306-1	Waste generation and significant waste-related impacts	7.2 Building a Green Hospital	201
	306-2	Management of significant waste-related impacts		
	306-3	Waste generated		
	306-4	Waste diverted from disposal		
	306-5	Waste directed to disposal		

GRI Standards / Topics		GRI Disclosure Content	Corresponding Chapter / Description	Page
Topic-specific standards: 400 Series (Social Topics)				
＊ Talent Development				
GRI2：General Disclosure 2021				
GRI 3Material Topics2021	3-3	Management of material topics	5.1 Cultivating Medical and Nursing Talent	143

GRI Standards / Topics		GRI Disclosure Content	Corresponding Chapter / Description	Page
GRI 404 Training and Education 2016	404-1	Average hours of training per year per employee	5.1 Cultivating Medical and Nursing Talent	143
	404-2	Programs for upgrading employeeskills and transition assistance programs		
	404-3	Percentage of employees receivingregular performance and career development reviews		

GRI Standards / Topics		GRI Disclosure Content	Corresponding Chapter / Description	Page
***Happy Workplace (Occupational Health and Safety)**				
GRI 401 Employment 2016	401-1	New employee hires and employee turnover	6.1 Talent Attraction and Retention	158
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees		
	401-3	Parental leave		
GRI 403 Occupational Health and Safety 2018	403-1	Occupational health and safety management system	6.3 Workplace Safety and Health	183
	403-2	Hazard identification, riskassessment, and incident investigation		
	403-3	Occupational health services		
	403-4	Occupational health Workerparticipation, consultation, andcommunication on occupational health and safety services		
	403-5	Worker training on occupational health and safety		
	403-6	Promotion of worker health	6.1 Talent Attraction and Retention 6.3 Workplace Safety and Health	157 183
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	6.3 Workplace Safety and Health	183

GRI Standards / Topics		GRI Disclosure Content	Corresponding Chapter / Description	Page
GRI 403 Occupational Health and Safety 2018	403-8	Workers covered by anoccupational health and safety management system	6.3 Workplace Safety and Health	183
	403-9	Work-related injuries		
	403-10	Work-related ill health		
GRI 405 Diversity and Equal Opportunity 2016 Topic Standard	405-1	Diversity in governance bodies and workforce	6.2 Friendly Workplace	180
	405-2	Ratio of basic salary and remuneration of women to men		

GRI Standards / Topics		GRI Disclosure Content	Corresponding Chapter / Description	Page
Custom Topics				
***Foresight (Medical) Research**				
GRI 3 Material Topics 2021	3-3	Management of material topics	4.1 Forward-looking Medical Research	121
***Promoting Smart Healthcare**				
GRI 3 Material Topics 2021	3-3	Management of material topics	4.3 (Promoting Smart Healthcare)	133
***Medical Quality and Safety Management**				
GRI 3 Material Topics 2021	3-3	Management of material topics	2.1 Medical Quality and Services	67

GRI Standards / Topics		GRI Disclosure Content	Corresponding Chapter / Description	Page
Non-material Topics				
GRI 201 Economic Performance2016	201-1	Direct economic value generated and distributed	1.4 Operational Performance	63
GRI2：General Disclosure 2021				
GRI 201 Economic Performance2016	201-2	Financial implications and other risks and opportunities due to climate change	7.1 Climate Action	196

GRI Standards / Topics		GRI Disclosure Content	Corresponding Chapter / Description	Page
GRI 201 Economic Performance 2016	201-3	Defined benefit plan obligations and other retirement plans	6.1 Talent Attraction and Retention	158
	201-4	Financial assistance received from government	1.4 Operational Performance	63
GRI 202 Market Presence2016	202-1	Ratios of standard entry level wage by gender compared to localminimum wage	6.1 Talent Attraction and Retention	158
	202-2	Proportion of senior management hired from the local community		
GRI 204 Procurement Practices2016	204-1	Proportion of spending on local suppliers	7.2 Building a Green	201
GRI 205 Anti-corruption2016	205-1	Operations assessed for risks related to corruption	1.2 Integrity Management	45
	205-2	Communication and training about anti-corruption policies and procedures		
	205-3	Confirmed incidents of corruptionand actions taken		
GRI 2072019	207-3	Stakeholder engagement and management of concerns related to tax	1.4 Operational Performance	63
GRI 308Supplier Environmenta Assesment 2016	308-1	New suppliers that were screened using environmental criteria	7.2 Building a Green Hospital	201
	308-2	Negative environmental impacts in the supply chain and actions taken		
GRI 402 Labor/Management Relations 2016	402-1	Minimum notice periods regarding operational changes	6.1 Talent Attraction and Retention	158
GRI 406 Non-discrimination 2016	406-1	Incidents of discrimination and corrective actions taken	There were no reported incidents of discrimi-nation in 2024	
GRI 409 Forced or Compulsory Labor 2016	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	6.1 Talent Attraction and Retention	158

GRI Standards / Topics		GRI Disclosure Content	Corresponding Chapter / Description	Page
GRI 411 Rights of Indigenous Peoples 2016	411-1	Incidents of violations involving rights of indigenous peoples	6.1 Talent Attraction and Retention	158
GRI 414 Supplier Social Assessment 2016	414-1	New suppliers that were screened using social criteria	7.2 Building a Green Hospital	201
	414-2	Negative social impacts in the supply chain and actions taken		
GRI 417 Marketing and Labeling 2016	417-1	Requirements for product and service information and labeling	2.3 Doctor-patient relationship	81
GRI 418 Customer Privacy 2016	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	4.2 Privacy Protection	129

8.3 SDGs Correspondence Table

The SDGs include 17 Goals and 169 Targets, which will serve as the global development agenda from 2016 to 2030. NCKU Hospital aligns its sustainability efforts with 7 of the SDG goals.

2024 SDGs Implementation Actions

SDGs		2024 Implementation Actions
	Ensure healthy lives and promote well-being for all at all ages	◉ The Geriatric Hospital under construction is planned as a wall-free, community-based specialized hospital for integrated elderly care, extending senior medical services into communities and ho mes to enhance the health and well-being of older adults. ◉ The NCKU Shalun Hospital under construction aims to become the core institution of the national pediatric care network, focusing on research, development, and talent cultivation for emergency, critical, complex, and rare pediatric care. ◉ Health management courses, psychological counseling services, and the establishment of a dedicated AP task force continue to support the physical and mental well-being of staff.
	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	◉ A childcare center has been established to provide professional care services for employees' children aged 0 to 2, in conjunction with NCKU Non-Profit Kindergarten, extending care to children over 2 years old. ◉ Contracted childcare centers and after-school programs offer discounted tuition plans for employees, reducing family financial burdens and commuting stress, enabling staff to focus more confidently on their work.
	Achieve gender equality and empower all women and girls	◉ Promoting maternal labor health protection policies. ◉ Committed to creating a family-friendly workplace environment. ◉ Providing in-hospital gender equality awareness campaigns, gender mainstreaming training, and other gender equality promotion initiatives.
	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	◉ Over the past three years, continuous attention has been given to the employment of minority and disadvantaged groups, with hires spanning various age groups and genders. In 2024, a total of 174 employees from disadvantaged groups were hired, marking a significant increase compared to 2023 and demonstrating the hospital's active commitment to social equity and diversity.

SDGs		2024 Implementation Actions
	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	◉ NCKU Hospital promotes the Shalun Health Service and Digital Innovation Park Project, developing smart medical services to enhance healthcare quality and efficiency, while fostering innovative development in regional digital and green energy industries.
	Take urgent action to combat climate change and its impacts	◉ Promoting the YouBike Carbon Reduction Passbook APP, integrating digital tools with sustainable actions to encourage staff to practice environmental protection using low-carbon transportation. ◉ NCKU Hospital signed the "Hospital Sustainable Development Initiative" with the Taiwan Sustainable Energy Research Foundation, responding to the 2050 net-zero emission policy by promoting green healthcare, integrating ESG and digital transformation to enhance medical efficiency and service quality.
	Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development	◉ NCKU Hospital will hold 2 international symposium-related exchange programs in 2024; 20 trainees from abroad will come to Taiwan for training.

8.4 SASB Standards Comparison Table- Health Care Delivery(All)

Sustainability Disclosure Indicators

Topic	Sasb Code	Disclosure Indicators	Nature	Report Content or Descriptions
Energy Management	Hc-Dy-130a.1	❶ Total Energy Consumed ❷ Percentage Grid Electricity ❸ Percentage Recycled	Quantification	❶ 239,203.56gj。 ❷ 87.83 %。 ❸ 0%。
Waste Management	Hc-Dy-150a.1	Total Weight Of Medical Waste And Percentage ❶ Incineration ❷ Recycling Or Reuse ❸ Landfill	Quantification	Total Weight Of Medical Waste: 2124.34 Metric Tons ❶ Incineration:78.44%. ❷ Recycling Or Reuse21.56%. ❸ Landfill:0%.
	Hc-Dy-150a.2	Total Amount Of Hazardous Pharmaceutical Waste And Non-Hazardous Pharmaceutical Waste, And Percentage ❶ Incineration ❷ Recycling Or Reuse ❸ Landfill	Quantification	Biomedical Waste: 370.44 Metric Tons. ❶ Incinerated: 100% . ❷ Recycled Or Treated: 0%. ❸ Landfilled: 0% .

Topic	Sasb Code	Disclosure Indicators	Nature	Report Content or Descriptions
Patient Privacy & Electronic Health Records(Ehr)	Hc-Dy-230a.2	Description Of Policies And Practices To Secure Customer's Protected Health Information (Phi) Records And Other Personally Identifiable Information(Pii)	Description And Analysis	❶ Established An Information Security Policy; All It Department Staff Have Signed The "Information Usage And Confidentiality Agreement." ❷ Passed Iso 27001:2022 Information Security Management Certification. ❸ Conducted Hospital-Wide Information Security Training Sessions, Totaling 4 Sessions And 48 Hours In 2024. ❹ Hold 4 Professional Cybersecurity Certifications. ❺ No Patient Data Breaches Occurred In 2024. ❻ Use Encryption Technology To Protect Patient Data Transmission And Storage; Set Up Firewalls And Intrusion Detection Systems To Prevent Unauthorized Access; Perform Regular System Vulnerability Scans And Patches. ❼ Strictly Restrict Access To Medical Records, Granting Authorization Only To Relevant Medical Personnel; Establish Audit Mechanisms To Monitor Usage And Modification Logs; Actively Lock Sensitive Medical Data Requiring Approval For Access. ❽ Annually Formulate The "Health Information Confidentiality Audit Plan," Conducting Confidentiality Audits For Nursing Stations And Examination Units Across The Hospital. Audit Results Are Reported And Reviewed At The Medical Records Committee. The 2024 Health Information Privacy Protection Audit Score Was 99.7 Points.
	Hc-Dy-230a.3	❶ Number Of Data Breaches ❷ Percentage Involving (A) Personally Identifiable Information (Pii) Only And (B) Protected Health Information (Phi) ❸ Number Of Customers Affected In Each Category, (A)Pii Only (B) Phi	Quantification	No Related Incidents Occurred In 2024.

Topic	Sasb Code	Disclosure Indicators	Nature	Report Content or Descriptions
	Hc-Dy-230a.4	Total Amount Of Monetary Losses As A Result Of Legal Proceedings Associated With Data Security And Privacy	QuantificationTitativequantification Titative	In 2024, The Hospital Incurred No Financial Losses Due To Legal Actions Related To Data Security And Privacy Rights.
Access For Low-Income Patients	Hc-Dy-240a.1	Discussions Of Strategy To Manage The Mix Of Patient Insurance Status	Description And Analysis	In 2024, Referrals To Private Resources For Subsidies Totaled 2,390 Cases, Amounting To Nt$10,529,582; Official Applications For Government Subsidies Totaled 246 Cases, Amounting To Nt$3,386,726. The Total Subsidies For Disadvantaged Patients Were 2,636 Cases, Totaling Nt$13,916,308.
Quality Of Care And Patient Satisfaction	Hc-Dy-250a.2	Hospital-Acquired Condition (Hac) Score Per Hospital	Quantification	No Major Medical Incidents Occurred At The Hospital In 2024.
	Hc-Dy-250a.6	Number Of ❶ Unplanned And ❷ Total Readmissions Per Hospita	Quantification	The Hospital's Monitoring Targets Are Related Cases Of Readmission Within 14 Days After Discharge From The Hospital: ❶ 481 Cases. ❷ 3,670 Cases.
Management Of Controlled Drugs	Hc-Dy-260a.1	Description Of Policies And Practices To Manage The Number Of Prescription Issued For Controlled Substances	Description And Analysis	❶ The Hospital Has Established A "Controlled Substances Management Committee" To Oversee The Prescription And Use Of Controlled Substances, Preventing Misuse, Abuse, And Diversion, Thereby Ensuring Patient Medication Safety. ❷ The "Controlled Substances Management Committee" Holds Regular Meetings Every Three Months And May Convene Special Meetings When Necessary. Meeting Conclusions Are Recorded And Tracked To Enforce In-Hospital Management Of Controlled Substances. ❸ Regular Follow-Up Is Conducted On Cases Reported To The Food And Drug Administration To Review Medication Use And Pain Improvement, With Results Reported To The Fda And The Tainan City Health Bureau.

Topic	Sasb Code	Disclosure Indicators	Nature	Report Content or Descriptions
Pricing And Billing Transparency	Hc-Dy-270a.1	Discussion Of How Pricing Information For Services Is Made Publicly Available	Explanation And Analysis	Transparent Charging Methods ❶ The Hospital's Charging Standards Comply With The Regulations Of The National Health Insurance Administration And Publicly Disclose All Self-Paid Medical Expense Items On The Official Website And Prominent Locations Within The Hospital, Including Outpatient And Emergency Registration Fees, Nhi Co-Payments, Ward Surcharges, Patient Meals, Self-Paid Surcharges, And Self-Paid Special Materials. ❷ Any Changes In The Charging Standards Or Amounts For Self-Paid Medical Items Are Proactively Reported To The Health Bureau In Writing As Required.
	Hc-Dy-270a.2	Discussion Of How Pricing Information For Services Is Made Publicly Available	Explanation And Analysis	**TRANSPARENT CHARGING METHODS** ❶ The Hospital's Charging Standards Comply With The Regulations Of The National Health Insurance Administration And Publicly Disclose All Self-Paid Medical Expense Items On The Official Website And Prominent Locations Within The Hospital, Including Outpatient And Emergency Registration Fees, Nhi Co-Payments, Ward Surcharges, Patient Meals, Self-Paid Surcharges, And Self-Paid Special Materials. ❷ Any Changes In The Charging Standards Or Amounts For Self-Paid Medical Items Are Proactively Reported To The Health Bureau In Writing As Required.
	Hc-Dy-270a.3	Number Of The Entity's 25 Most Common Services For Which Pricing Information Is Publicly Available, Percentage Of Total Services Performed (By Volume) That These Represent	Quantitative	**TOP 10 INPATIENT DISEASE STATISTICS** ❶ Malignant Neoplasms Percentage Of Total Services Performed: 21.35%. ❷ Heart Diseases Percentage Of Total Services Performed: 5.09%. ❸ Diseases Of The Digestive System Percentage Of Total Services Performed: 4.67%.

Topic	Sasb Code	Disclosure Indicators	Nature	Report Content or Descriptions
				❹ Diseases Of The Urinary System Percentage Of Total Services Performed: 3.85%. ❺ Fractures (Excluding Skull Fractures) Percentage Of Total Services Performed: 3.55%. ❻ Pneumonia Percentage Of Total Services Performed: 3.48%. ❼ Cerebrovascular Diseases Percentage Of Total Services Performed: 3.47%. ❽ Benign (Unspecified) Tumors Percentage Of Total Services Performed: 3.29%. ❾ Surgical And Medical Complications, Nec Percentage Of Total Services Performed: 2.39%. ❿ Symptoms Percentage Of Total Services Performed: 2.26%. ⓫ Others Percentage Of Total Services Performed: 46.6%.
Employee Health & Safety	Hc-Dy-320a.1	Total Recordable Incident Rate (Trir) For ❶ Direct Employees And ❷ Contract Employees	Quantitative	❶ 0.01% ◦ ❷ 0 ◦
Talent Attraction, Development And Retention	Hc-Dy-330a.1	Voluntary And Involuntary Turnover Rate For Physicians, Non-Physician Health Care Practitioners, And All Other Employees	Quantitative	❶ Involuntary Turnover Rate: ◉ Physicians 0%. ◉ Non-Physician Healthcare Professionals 0.03%. ◉ All Other Employees 0.20%. ❷ Voluntary Turnover Rate: ◉ Physicians 1.37%. ◉ Non-Physician Healthcare Professionals 8.41%. ◉ All Other Employees 6.88%.

Topic	Sasb Code	Disclosure Indicators	Nature	Report Content or Descriptions
TALENT ATTRACTION, DEVELOPMENT AND RETENTION	Hc-Dy-330a.2	Voluntary And Involuntary Turnover Rate For Physicians, Non-Physician Health Care Practitioners, And All Other Employees	Explanation And Analysis	**(I) RECRUITMENT** Continuously Announce Recruitment Information On Job Banks And The Hospital's Nursing Department Website, Hold Campus Recruitment Events, And Conduct Weekly Interviews. **(II) RETENTION** ❶ New Employee Onboarding： (1) Innovative Onboarding Training Models. (2) Departments Prepare Welcome Kits And Concise Self-Study Materials. (3) Stress Relief Group Sessions Totaling 8 Hours Plus 3-Month Follow-Up Care Meetings. (4) Strengthen A Friendly And Caring Work Atmosphere Within Departments. ❷ Encouragement For Current Staff: (1) Transfer Request Mechanisms To Enhance Flexibility. (2) Provide Various Types Of Paid Leave, Free Training, Dispatch Training, And Competition Opportunities. ❸ Sustainable Development: (1) Talent Training: Conduct Beginner And Advanced Administrative Courses Annually To Train Nursing Administrators. (2) Reduce Nurse-To-Patient Ratio: Simplify Workflows, Implement Lean Management, And Cooperate With National Policies To Lower The Three-Shift Nurse-To-Patient Ratio, Reducing Workload.
Climate Change Impacts On Human Health & Infrastructure	Hc-Dy-450a.1			❶ The Impacts Of Climate Change On Human Health And Infrastructure Are Increasingly Severe, Presenting Challenges That Not Only Involve Environmental Changes But Also Profoundly Affect Human Life And Living Environments. Firstly, The Frequency And Intensity Of Extreme Weather Events Have Increased, Posing Direct Risks To Human Health.

Topic	Sasb Code	Disclosure Indicators	Nature	Report Content or Descriptions
Climate Change Impacts On Human Health & Infrastructure	Hc-Dy-450a.1	Description Of Policies And Practices To Address (1) The Physical Risks Due To An Increased Frequency And Intensity Of Extreme Weather Events, (2) Changes In The Morbidity And Mortality Relates Of Illnesses And Diseases, Associated With Climate Change, And (3) Emergency Preparedness And Response.	Explanation And Analysis	With The Rising Occurrence Of Extreme Heatwaves, Heavy Rains, Typhoons, And Other Severe Weather Events, People Are Exposed To Higher Risks Of Climate Disasters. Heatwaves Can Cause Increased Incidences Of Heatstroke, Dehydration, And Cardiovascular Diseases, While Powerful Typhoons And Heavy Rains May Lead To House Collapses, Floods, And Landslides, Threatening Human Lives And Property. Moreover, These Extreme Events Often Hinder Effective Rescue And Medical Resource Deployment,Complicating Post-Disaster Recovery Efforts. ❷ In The Medical And Public Health Field, Dengue Fever Is Also Regarded As A Critical Infectious Disease Affected By Climate Change. Studies In Taiwan Show That With Each 1°C Rise In Monthly Average Temperature, The Population Infected With Dengue Fever Increases By 1.95 Times, And The Number Of Townships In High-Risk Infection Zones Rises By About 25%. Located In The Hot Southern Taiwan Region, The Hospital Periodically Faces Challenges From Dengue Fever Outbreaks. In 2024, The Hospital Reported 1,222 Dengue Cases (67 Confirmed), A Significant Decrease Compared To 5,110 Reported Cases (1,725 Confirmed) During The 2023 Outbreak. ❸ The Hospital Has Established A "Crisis Management Committee," Responsible For Coordinating Crisis Response And Safety Management. It Holds Regular Meetings Every Three Months And May Convene Special Meetings When Necessary. Relevant Plans Are Compiled And Submitted To Supervisory Authorities For Review To Ensure Timely And Effective Emergency Response And Disaster Handling. For Special Infectious Diseases, Timely Announcements Are Made To All Staff To Raise Awareness And Comply With Related Epidemic Prevention Policies. The Hospital Also Requests The Establishment Of Response Teams As Needed. Regarding Dengue Fever, The Hospital Collaborates With The Tainan City Health Bureau By Using Government-Funded Rapid Dengue Test Kits To Strengthen Monitoring And Participates In A Prevention Network With Other Medical Institutions And Health Bureaus In Greater Tainan To Jointly Prevent And Treat Severe Cases.

Topic	Sasb Code	Disclosure Indicators	Nature	Report Content or Descriptions
Climate Change Impacts On Human Health & Infrastructure	Hc-Dy-450a.1		Explanation And Analysis	❹ The Hospital's "Crisis Management Committee" Is Dedicated To Coordinating Crisis Response And Safety Management, Holding Regular Meetings Every Three Months And Special Meetings As Needed. Compiled Plans Are Submitted To Supervisory Authorities To Ensure That Emergency Response Operations And Disaster Handling Are Timely And Effective.
Fraud And Unnecessary Activities	Hc-Dy-510a.1	Total Amount Of Monetary Losses As A Result Of Legal Proceedings Associated With Medical Fraud Under Laws And Regulations.	Quantitative	In 2024, The Hospital Incurred No Financial Losses Due To Legal Actions Related To Medical Fraud.

OPERATIONAL INDICATORS

Sasb Code	Disclosure Indicators	Nature	Report Content or Descriptions
Hc-Dy-000.A	By Service Type： ❶ Number Of Medical Facilities ❷ Number Of Beds	Quantification	❶ Outpatient Building, Inpatient Building. ❷ Number Of Beds ◉ Acute General Beds: 916. ◉ Special Beds: 287. ◉ Acute Psychiatric Beds: 30. ◉ Intensive Care Beds: 126.
Hc-Dy -000.B	❶ Number Of Admissions ❷ Number Of Outpatient Visits	Quantification	❶ Number Of Admissions：175,504. ❷ Number Of Outpatient Visits：1,632,843.

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