

Perspective

Overseas health checkup initiatives: perspectives on Vietnam

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Abstract

Objective: To describe Vietnam's occupational health and healthcare systems and evaluate the feasibility of standardized medical examinations for workers, aligned with Japanese practice. **Methods:** A narrative review was conducted using official reports, national health statistics, legislative documents and other literature related to Vietnam's healthcare and occupational safety and health (OSH) systems. Feasibility was assessed across governance, workforce, infrastructure, financing, and quality assurance domains. **Results:** Vietnam has established a mixed public–private healthcare model with a four-tiered system, expanded social health insurance, and implemented hospital quality management. Occupational health is governed by the Ministry of Labor, Invalids, and Social Affairs (MOLISA) and the Ministry of Health, supported by agencies such as the Vietnam Health Environment Management Agency and the National Institute for Occupational and Environmental Health. The monitoring activities are supplemented by the establishment of provincial Centers of Disease Control in each of Vietnam's 63 provinces. Despite notable strengths, such as the existing preventive medicine infrastructure, significant disparities in implementation remain across sectors and provinces. While preventive medicine physicians receive occupational health training, no formal residency programs for occupational medicine specialists currently exist. **Conclusion:** Vietnam's health and OSH system provides a foundation for standardized worker health examinations. Adopting a model similar to Japan could improve early detection of occupational diseases, among both domestic and returning migrant workers. Strict adherence to the privacy measures might allow for the cross-border exchange of medical data between Vietnam and Japan.

Keywords: health examination, Japan, migrant workers, occupational diseases, occupational health, Vietnam

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Introduction

Globalization has led to an increase in the number of workers migrating between countries, including into and out of Japan. In Japan, Vietnamese migrant workers are the largest group of foreign workers, working in various areas¹.

Vietnam has a long history of sending workers overseas, with labor export being a fundamental socioeconomic development policy during the Doi Moi era in Vietnam²). Since 1992, a signed agreement between the Vietnam Ministry of Labor, Invalids, and Social Affairs (MOLISA) and the Japan International Training Cooperation Organization has seen Japan accept Vietnamese workers under the Program on Sending and Receiving Foreign Internship in Japan, primarily through the Japanese Industrial Training Program and the Technical Internship Program^{2,3}).

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Japan's occupational safety and health (OSH) legislation requires medical examinations for former workers who have been exposed to dangerous substances. These people are given a notebook of personal health record (nPHR) upon retirement or later, to track their health condition⁴. In 1991, the Ministry of Health, Labour and Welfare (MHLW) issued a decree stating that this requirement applies to both Japanese and foreign, including Vietnamese, workers^{4,5}.

Upon retirement, foreign workers typically return to their home country. However, several countries currently lack systems designed to perform systemic health assessments of returning foreign workers, resulting in considerable gaps in healthcare accessibility and disease treatment for this population⁶.

We are engaged in the Overseas Health Checkup Initiative (OHCI) project under the MHLW of Japan. This project aims to collaborate with various nations, including Vietnam, to identify medical institutions and propose strategies for effective health management following the return of foreign workers. This paper documents Vietnam's occupational health and healthcare systems and evaluates the feasibility of introducing standardized worker medical examinations aligned with Japanese standards. To this end, we emphasize the principal strengths and shortcomings of the current system, as observed from an academic medical standpoint.

General information about Vietnam

Vietnam is a tropical Southeast Asian nation bordered by China, Laos, and Cambodia, situated on the eastern periphery of the Indochina Peninsula. Vietnam's total land area is 331.3 km², and it is partitioned into 63 provinces. Vietnam is divided into six geographic socioeconomic regions: Northern Midlands and Mountain Areas; Red River Delta; North Central and Central Coastal Areas; Central Highlands; South East; and Mekong River Delta. Vietnam's capital, Hanoi, is located in the Red River Delta. Ho Chi Minh City (formerly Saigon) is the largest city located between the South East and Mekong River Delta regions^{7,8} (Figure 1).

In 2023, Vietnam's population was over 100.3 million⁷. Vietnam is a multiethnic nation, home to 54 distinct ethnic groups, most of which are situated in the mountainous or remote regions. In 2023, Vietnam's urban and rural populations were 38.2 million and 62.1 million, respectively⁷. In the same year, the labor force comprised 52.4 million people aged ≥ 15 years, with 62.6% of Vietnam's workforce concentrated in rural regions. Among the six socioeconomic regions, the Red River Delta and the North Central and Central Coastal Areas had the largest share of employed workers (22.6% and 20.4%, respectively⁹; Table 1).

The transition of Vietnam from a centrally planned to a market economy has resulted in the country's transformation from one of the world's weakest economies to a low-

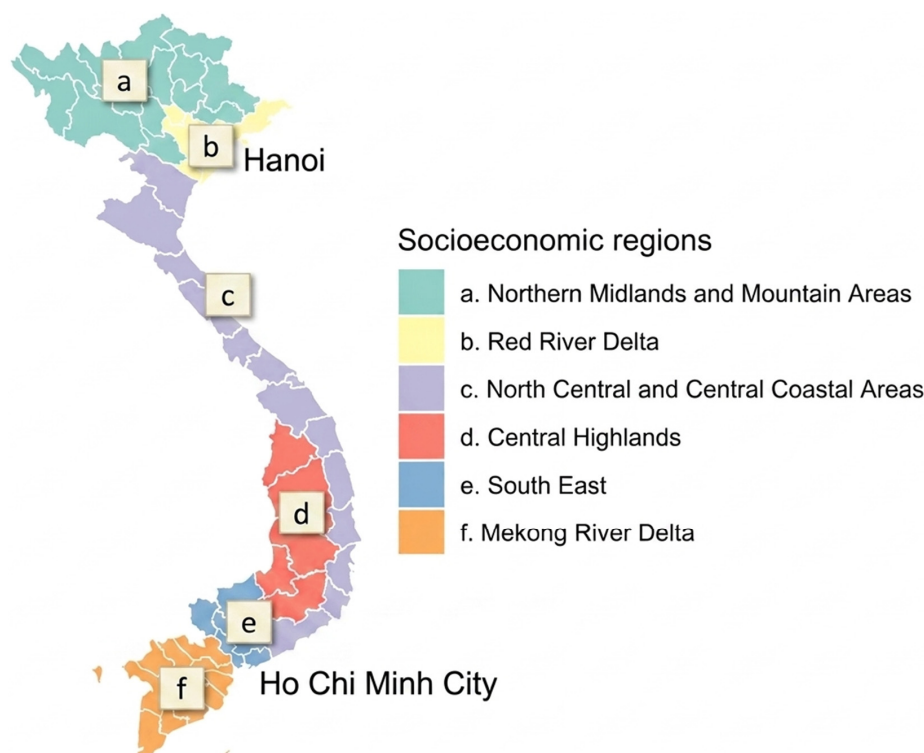


Fig. 1. Map of Vietnam showing socioeconomic regions and major cities

Table 1. Number of population and health facilities in Vietnam

Indicators	Entire Country	Socioeconomic regions					
		Northern Midlands and Mountain Areas	Red River Delta	North Central and Central Coastal Areas	Central Highlands	South East	Mekong River Delta
Population and labor force number							
Area (× 103 km ²)	331.3	95.2	21.3	95.8	54.5	23.6	40.9
Mean population (× 10 ⁶ people)	100.3	13.1	23.7	20.8	6.1	19.1	17.5
Labor force (× 10 ⁶ people)	52.4	6.2	11.8	10.8	3.6	10.5	9.5
Number of hospital beds overall and according to type of health facilities							
Total	460,097	62,827	128,036	108,741	19,516	76,564	64,413
In hospitals	336,329	39,280	99,474	81,286	11,022	63,027	42,240
In polyclinics, special clinics, family doctor and health centers	112,455	22,627	23,838	24,489	8,154	11,881	21,466
Others	11,313	920	4,724	2,966	340	1,656	707
Number of doctors per 10,000 people in the period 2018–2020							
2018		9.74	9.89	8.76	6.88	8.78	7.91
2019		11.49	10.37	9.52	7.97	10.08	9.45
2020		10.52	7.42	9.42	7.41	9.31	8.04

or middle-income country¹⁰). Currently, Vietnam is one of the most dynamic emerging nations in the East Asia region, with the real gross domestic product per capita at current prices increasing year on year and reaching United States dollar (USD) 4,323 per person in 2023^{7,10}.

Healthcare in Vietnam

Healthcare system

Vietnam's healthcare system operates as a mixed public–private model. Healthcare is delivered across four administrative levels: national/central (Level I), provincial (Level II), district (Level III), and commune (Level IV). Provincial (Level II) facilities provide care to a population of 1–2 million; district (Level III) facilities provide care to a population of 100,000–200,000; and commune (Level IV) facilities provide care to a population of approximately 5,000–10,000^{11,12}.

In Vietnam, the Ministry of Health (MoH) formulates and advances policy agenda. Health policymaking frequently follows a top-down approach, characterized by centralized decision-making and systematic implementation^{12,13}. The MoH oversees health facilities, managing provincial, district, and commune health services, and is responsible for the development and implementation of healthcare services at the appropriate level. In addition to health facilities, the MoH oversees other facilities, including research institutes, Pasteur institutes and medical colleges^{12,14} (Figure 2).

Primary healthcare services are delivered at the communal and district levels, which serve as the foundations of the Vietnamese national health program. Specialist medical secondary and tertiary care is provided at the

provincial and central levels^{11,15}. The MoH provides guidance on the provision of healthcare and the relationship between higher- and lower-level institutions, known as the Direction of Healthcare Activities (DOHA) or *Chi đạo tuyến* in Vietnamese¹⁵.

Healthcare facilities and resources

As of December 31, 2020, Vietnam had a total of 1,029 hospitals, along with 29,644 polyclinics, specialty clinics, and family doctor and health centers, as well as 3,536 other types of medical and treatment facilities distributed over the six regions¹⁶ (Figure 3). Of the 1,029 hospitals, 721 were managed by the government and 308 were private. Across all health facilities, there were 460,097 hospital beds. The Red River Delta region had the most hospital beds (128,036 hospital beds, or 55.1 beds per 10,000 people; Table 1)¹⁶. Nationwide, the public sector accounted for 96% of hospital beds and the private sector accounted for the remaining 4%¹⁷. Private health facilities started to thrive in Vietnam in the late 1990s and early 2000s, when economic reforms (Doi Moi) were initiated. The healthcare network has developed primarily in highly populated urban areas^{11,17}.

To guarantee the health and welfare of Vietnam's growing population, it is imperative that the number of professional personnel in the healthcare sector increases. The entire country has 113,118 doctors, which equates to approximately 11.5 doctors per 10,000 people¹⁶. In urban centers such as Hanoi and Ho Chi Minh City, there are 9–11 physicians per 10,000 people, whereas in remote provinces there may be as few as 6–7 doctors per 10,000 people (Table 1)¹¹. Consequently, healthcare resources in mountainous and remote provinces remain deficient^{11,17}.

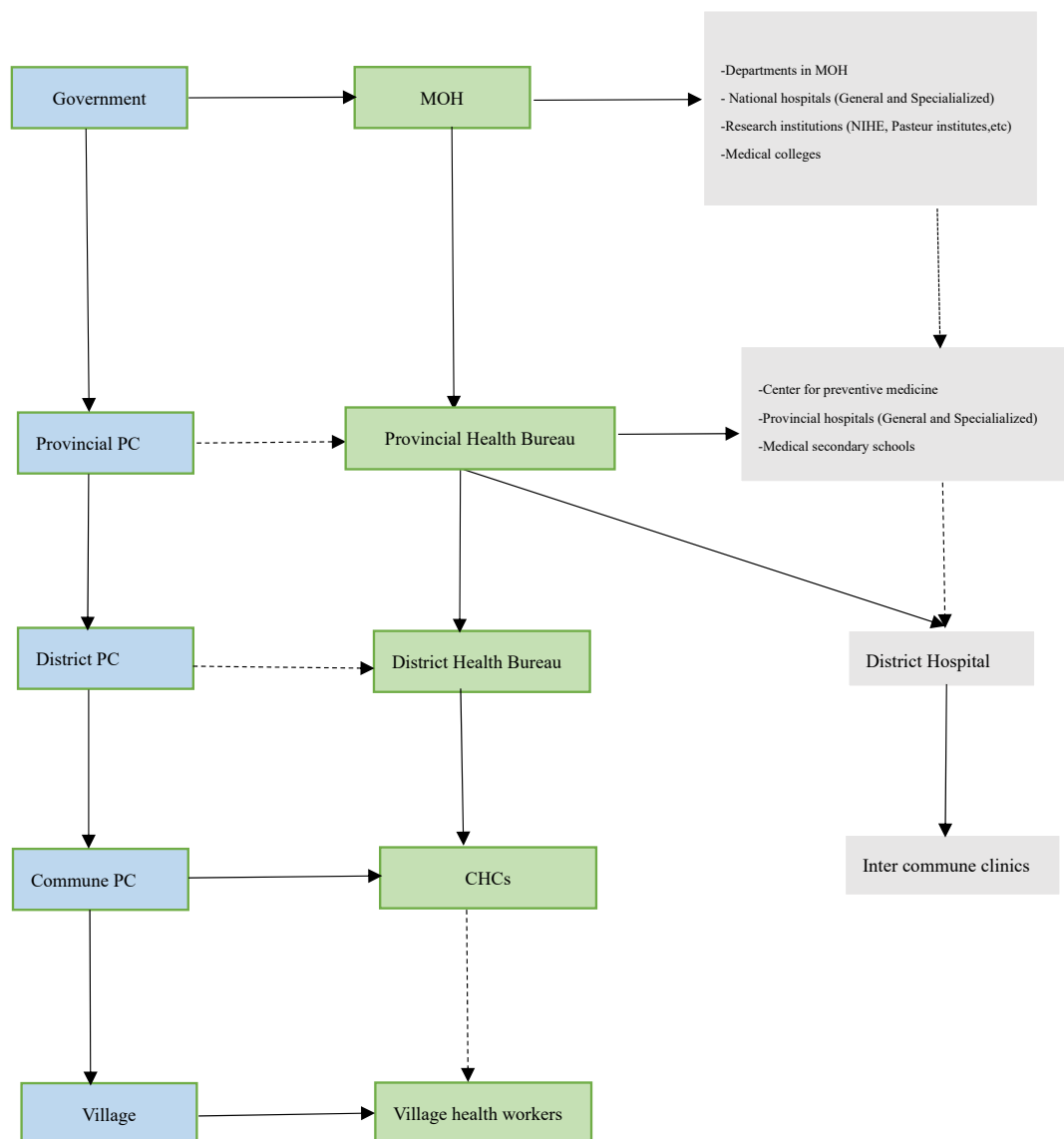


Fig. 2. Schematic showing the different components of the healthcare system in Vietnam
CHCs, commune health centers; MoH, Ministry of Health; NIHE, National Institute of Hygiene and Epidemiology;
PC, people committee.

Other factors critical for improved healthcare services are medical devices and health management information systems. Vietnam has made substantial advances in its health management information system. Numerous health statistics are published annually, such as statistical yearbooks^{17,18)}, and, since June 2018, it has been a goal to advance the use of electronic health records¹⁸⁾. However, the quality of medical records and databases in Vietnam varies across hospitals and clinics. Most healthcare facilities do not have a centralized medical record system and, as such, patients can have multiple medical records. Moreover, many medical institutions continue to use paper records for patient information and medical conditions¹⁸⁾. The coronavirus disease 2019 (COVID-19) pandemic accelerated Vietnam's digital transformation

in many sectors, especially healthcare, to ensure patient access to essential treatments, with telemedicine, electronic medical records, and grassroots-level health information systems currently prioritized projects¹³⁾.

Since most of the hazard workplace detected in Japan is causing occupational lung disease, in this paper we focus on imaging devices to help with the detection of this disease. The exact number of imaging devices in Vietnam is not publicly available. However, one 2009 study reported that approximately 80% of hospitals across the provinces, cities, and all central hospitals have some sort of imaging device¹⁹⁾. Specifically, it was reported that there were 174 X-ray computed tomography (CT) scanners (including 16 64-slice CT scanners and one 128-row multidetector CT scanner), 51 magnetic resonance imag-

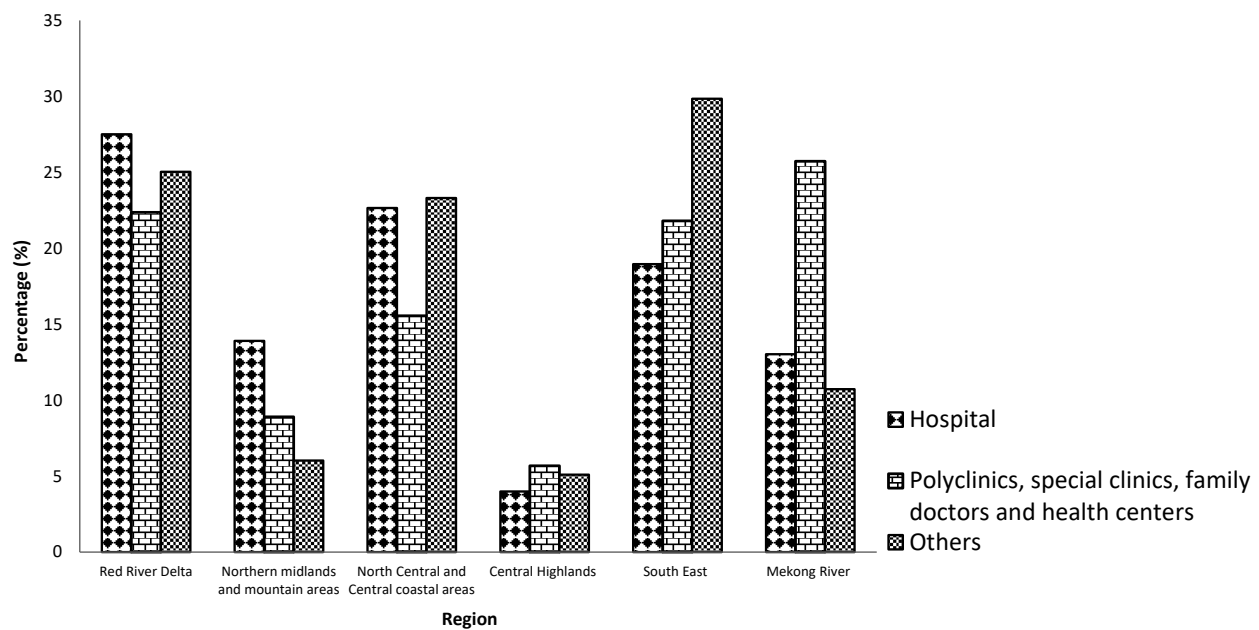


Fig. 3. Distribution of different types of health facilities according to region

ing (MRI) systems (including 16 1.5-T and one 3.0-T MRI system), and 21 angiography systems in Vietnam¹⁹. In 2023, the diagnostic imaging market in Vietnam was estimated to be worth USD 201.04 million, primarily dominated by the South East region owing to its aggregation of healthcare resources²⁰.

Healthcare quality control

In 2013, Vietnam introduced a mandatory quality management system and assessment standards for all hospitals, as stipulated in Circular No. 19/2013/TT-BYT. Issued on July 12, 2013, this circular serves as the foundational regulation for hospital quality management in Vietnam^{8,21}. The quality assessment tool comprises 83 items criteria across some domains with each item scored on a scale of 1 to 5^{8,13,14,21}. Ten hospitals in Vietnam, primarily in Ho Chi Minh City, have received international certification from organizations, such as the Joint Commission International²².

A monitoring system will establish financial incentives for hospitals to enhance the services they provide and attract more patients. Despite ongoing debate in the Vietnamese media regarding hospital quality, patient satisfaction with public healthcare has shown an upward trend over time. For example, the mean patient satisfaction index increased marginally to 4.04/5 (80.8%) in 2018, compared with a score of 3.98/5 (79.6%) in 2017¹³.

The Law on Medical Examination and Treatment, implemented in 2011, mandates that medical practitioners have a valid license to practice and that they consistently undertake activities to improve their medical knowledge. By 2015, 95% of health facilities and 92% of health personnel in MoH hospitals, 25% of health facilities and

67% of health personnel in hospitals under other ministries and agencies, and 65% of health facilities and 89% of health personnel in hospitals under provincial departments of health had been licensed¹⁷.

Healthcare financing

The 2021 Economic Census in Vietnam reported that health activity total revenue reached Vietnamese Dong (VND) 270.99 trillion, reflecting a 54.8% growth from 2016. The Red River Delta has the largest health income (VND 93.7 trillion in 2020) due to the concentration of numerous large central hospitals¹⁶. In 1992, the Vietnamese Government implemented a formal social health insurance (SHI) scheme to safeguard the population against the financial burden of illness and to enhance access to healthcare services²³.

The SHI scheme is managed by the Vietnam Social Security (VSS) system. Initially, SHI was mandatory for state officials and civil servants, employees of state enterprises and medium and large non-state enterprises, and those receiving a social security allowance. The SHI scheme was subsequently expanded to include voluntary SHI for those individuals who were not eligible for coverage under the compulsory SHI scheme^{11,13}.

In 2023, 18.4 million individuals had social insurance (reflecting a year-on-year gain of 5.2%), 93.6 million individuals had health insurance (year-on-year gain 2.8%), and 14.8 million individuals had unemployment insurance (year-on-year growth 3.2%)⁷.

In Vietnam, the SHI scheme provides a comprehensive package covering a wide range of ambulatory and hospital care services, as well as advanced diagnostic, curative, and therapeutic service^{23,24}. The 2014 revision of the Law

on Healthcare Insurance allowed three types of provider payment: capitation, fee for service, and diagnosis-related group (DRG) payment. Insurance provides greater financial protection at district and higher-level state hospitals than at community health centers^{13,24)}.

OSH in Vietnam

OSH governance

In Vietnam, the administration of OSH is overseen by MOLISA, the MoH, and the trade union Vietnam General Confederation of Labour, as well as ministries of particular industries (eg, Ministry of Agriculture and Rural Development; Ministry of Transportation; Ministry of Construction). There are three OSH council levels: national, provincial, and grassroots. Both MOLISA and the MoH have important roles in the administration of OSH: MOLISA is accountable for ensuring work safety, whereas the MoH is responsible for the provision, safeguarding, and advancement of workers' health^{8,25,26)}.

There are some organizations under MOLISA and the MoH that have specific responsibilities, such as the Vietnam Health Environment Management Agency, which has responsibilities related to health and the environmental (eg, environmental health; hygiene; and occupational health, including occupational diseases and accident/injury prevention). These organizations coordinate national-level disease surveillance, policy, and risk assessments. The National Institute for Occupational and Environmental Health (NIOEH) is in charge of scientific research, international cooperation and scientific–technological services related to occupational and environmental health^{27,28)}.

The Bureau of Safework in MOLISA is responsible for the administration of OSH nationally. The Vietnam National Institute for Occupational Safety and Health, under the VCGL, is the leading national agency responsible for research, policy development, training, and technical guidance in OSH. Both these organizations collaborate with international agencies, such as the International Labour Organization (ILO), Japan International Cooperation Agency, Korea International Cooperation Agency, the National Institute for Occupational Safety and Health in the United States, and ILO SafeWork^{27,29)}.

In addition to the examinations and monitoring activities undertaken by these organizations, Vietnam has provincial Centers of Disease Control, which have been established across all 63 provinces. Similarly, Vietnam's Department of Labour, Invalids and Social Affairs (DOLISA), which operates at the provincial level, further supports and monitors 697 district divisions^{26,30)}.

Key organizations in Vietnam relevant to migrant workers include the Department of Overseas Labour (DOLAB) under MOLISA, DOLISA, and sending agencies. DOLAB is the primary authority responsible for the

regulation of overseas labor export, whereas DOLISA is responsible for licensing recruitment agencies, managing labor contracts, and welfare protection³¹⁾.

Migrant workers may travel abroad only via licensed sending agencies, as stipulated by Vietnam's Labor Code and Decree no. 112/2021/NĐ-CP²⁾. The Japan International Training Cooperation Organization website lists 439 approved Vietnamese sending agencies³⁾. In 2003, the Minister of Internal Affairs established the Vietnam Association of Manpower Supply. This organization has partnered with the ILO to create a code of conduct for sending agencies, grounded in Vietnamese legislation and international labor standards²⁾.

Law on Occupational Safety and Health

The legal system in Vietnam is fundamentally structured on a normative hierarchy, with laws (codes) occupying the highest tier, followed by ordinances, decrees, decisions, and circulars²⁷⁾. The Law on Occupational Safety and Health (Law no. 84/2015/QH13) was enacted in 2015 after being passed by the National Assembly of Vietnam on June 25, 2015. The aim of the Law is to ensure workers' safety and health by stipulating various requirements for OSH, and the Law applies to workers with and without labor contracts. A legal system for OSH is currently being built in Vietnam centering on this Law, which comprises seven chapters^{8,25,32)}.

In Law no. 84/2015/QH13, Chapter II, Section 3 (Labour protection and health care for workers), Article no. 21 (Health check-up and treatment of occupational diseases for workers) states that employers must provide health checkups for workers at least once a year. Employers also must provide medical examinations for the detection of occupational diseases at health facilities that meet technical requirements and standards. All the costs associated with these activities are borne by employers³²⁾.

The MoH's Decision no. 1613/QĐ-BYT of August 15, 1997, established criteria for the classification of health into five levels: Type I, very good health; Type II, good health; Type III, average health; Type IV, poor health; and Type V, very poor health⁸⁾. In Vietnam, nearly 2 million employees undergo a periodic health checkup every year.

Table 2. Results of periodic health examinations for employees in the period 2016–2020

Health category	Number of individuals (%)
Type 1	2,273,248 (24.6)
Type 2	4,040,830 (43.7)
Type 3	2,061,012 (22.3)
Type 4	709,302 (7.7)
Type 5	171,876 (1.9)

Type I, very good health; Type II, good health; Type III, average health; Type IV, poor health; and Type V, very poor health

The results of periodic health examinations for workers from 2016 to 2020 (Table 2) show that 9,256,268 people underwent a health checkup, with health in most categorized as good (Type II; $n=4,040,830$ [43.7%]); however, 881,178 (9.6%) of those who underwent checkups were classified as having poor health (Types IV and V)²⁸⁾.

The MoH issued a circular to determine the types of examinations performed for compensated occupational diseases. There are 35 listed occupational diseases, with COVID-19 being the most recent. The types of examinations performed for several occupational lung disorders, including silicosis and asbestosis, are chest X-rays, respiratory function tests, CT scans, and the detection of acid-fast bacillus in the sputum (if necessary). The interval between periodic examinations for occupational lung diseases is 12 months, but for chronic bronchitis it is 6 months⁸⁾.

Article 37 of the Law on Occupational Safety and Health (2015) establishes requirements for occupational disease statistics and reporting, stating that all cases of occupational disease shall be counted and reported according to the regulations of the MoH^{8,32)}. Occupational Accident and Disease Insurance is a mandatory element of the overarching Vietnam Social Insurance framework and provides financial and medical support to workers affected by work-related accidents or occupational diseases. Premiums are calculated based on employees' monthly salaries and are paid by employers³²⁾.

Occupational disease

Over the period 1996–2020, occupational diseases occurred as a result of physical hazards (eg, noise), with noise-induced hearing loss having the highest incidence, followed by lung disease, occupational skin disorders, intoxication, and bacterial infections. Among those with occupational lung disease, most had occupational chronic bronchitis, followed by silicosis²⁸⁾ (Figure 4).

Currently in Vietnam, 224 units can monitor working environments. Yet, occupational diseases are currently not examined and treated in distinct hospitals; instead, they are treated in general hospitals at the district, provincial, and central levels, with each of these solely examining and treating patients with a certain condition. For example, the anti-poisoning section in Bach Mai Hospital exclusively evaluates and manages patients with acute poisoning, whereas employees of the coal and minerals sector are examined and treated (lung lavage) at the Vietnam Coal and Minerals Hospital (Van DK, personal communication, May 2025).

In Vietnam, the personnel involved in the OSH field come from diverse, multidisciplinary backgrounds, and include medical doctors. However, there is no official residency or fellowship program exists for occupational medicine specialists; only preventive medicine physicians are trained. To become a physician in occupational health's field, an individual must be a medical doctor (general, specialty, or epidemiology), with a minimum of 3 years of clinical experience, and have completed a 3-month certificate training course on occupational dis-

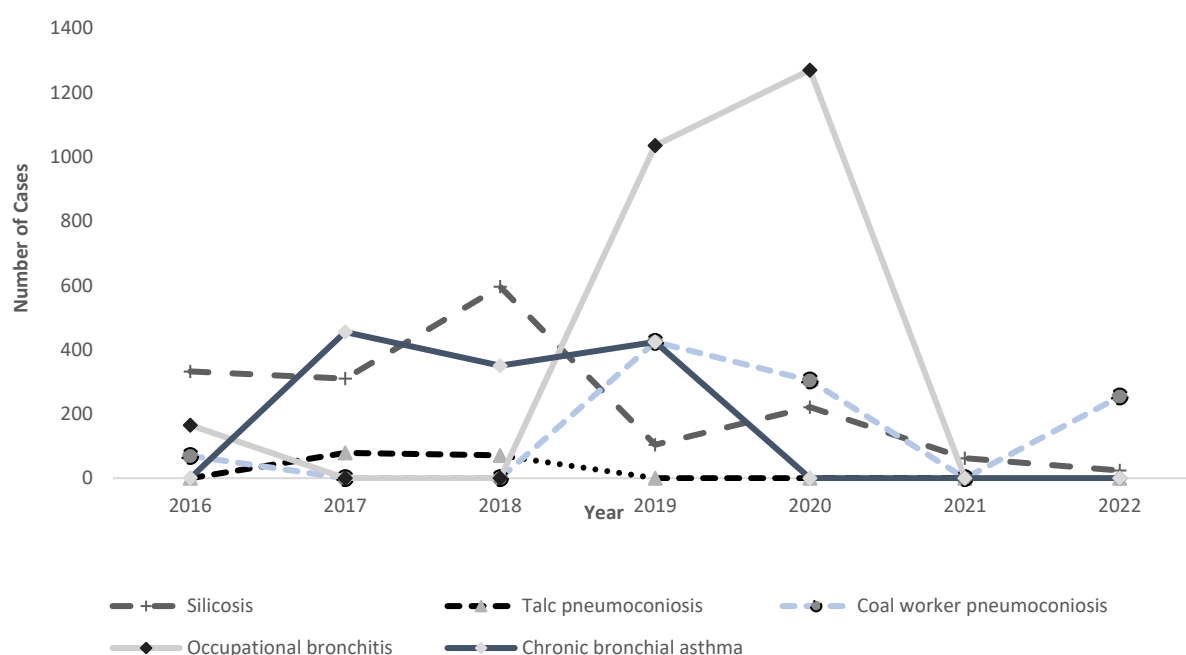


Fig. 4. Incidence of occupational lung diseases in Vietnam from 2016 to 2022

Cotton pneumoconiosis and asbestosis are not shown as no cases (0) were recorded throughout the study period. Occupational tuberculosis is not shown due to negligible case numbers across all years.

case at the NIOEH or a 9-month special orientation at the Institute of Preventive Medicine and Public Health, Hanoi Medical University⁸⁾, (Van DK, personal communication, May 2025).

Discussion

Healthcare systems consist of organizations, institutions, resources, and individuals whose primary goal is to improve health. In Vietnam, the governance of the healthcare system is decentralized to enhance accountability and interdisciplinary collaboration. In addition, the organizational framework of Vietnam's healthcare system has been modified to address healthcare requirements at several tiers, down to the local level. There have been considerable improvements in healthcare services in Vietnam, such as in the number of hospitals, hospital beds, and in the healthcare workforce.

However, disparities in healthcare service readiness and quality among sectors exist, with mountainous and remote provinces continuing to experience resource deficits. As a result, many patients still tend to avoid attending their designated local primary care centers and opt to self-refer to hospitals. Public hospitals, particularly in large cities, are generally overcrowded, with two or three patients sharing a bed, and patients may incur higher out-of-pocket costs. This and several other challenges affect the sustainability of the healthcare system^{17,23)}.

In Vietnam, to enhance the quality of care provided in hospitals, higher-level institutions could implement initiatives for technical transfer to lower-level facilities through a regulatory framework. A hospital quality management system was established in Vietnam in 2013 and, by 2015, had been implemented in 55.4% of hospitals across the country^{17,18)}. In fact, some private hospitals in Vietnam have obtained international accreditation, and the private sector is expanding rapidly. Therefore, it is essential to ensure integrated collaboration among stakeholders across all levels of the healthcare sector. Achieving collaboration among different-level hospitals should be integral to DOHA's mission, because DOHA has urged district and provincial hospitals to critically evaluate their services and consider strategies to enhance health service delivery with a focus on patient-centered care.

The integration of occupational health services and the healthcare system is crucial in both local and national contexts to ensure comprehensive protection for workers. OSH infrastructure is characterized by its capacity to provide services, its coverage, and its interactions with workers, employers, and workplaces. Vietnam has made substantial strides in the formalization of its OSH system, particularly in terms of legal and policy framework. As recommended by the ILO²⁷⁾, OSH policies need to be authorized at high political levels, such as by parliaments, governments, or responsible ministries.

However, occupational health protection, prevention, and improvement programs that are integrated with management and primary healthcare initiatives must be implemented consistently and comprehensively at the grassroots level. At all levels and across all enterprises, occupational health management units should be established to manage health records and occupational health data. In the case of Vietnam, the integration of occupational health management into individual health management records may be a critical factor to consider. To this end, health information systems play a critical role; they are a fundamental component that can be used as a basis for all decision-making processes within a health and OSH system, across different levels. During the COVID-19 pandemic, digital transformation gained momentum in Vietnam. Occupational health decision makers can benefit from digitized health facility data immediately and over time. In addition, data contained in health information systems could be used to monitor service delivery.

Consequently, healthcare and OSH services require a robust and systematic financing strategy. In Vietnam, healthcare funding is primarily derived from state budgets. Although the government prioritizes SHI, the growth of the SHI scheme is not keeping pace with population increases. Individuals not included in the SHI system predominantly originate from the informal sector and rural regions^{13,23)}. Although fair finance mechanisms are in place and SHI coverage is expanding, out-of-pocket costs remain high²⁴⁾. Therefore, it is imperative that the SHI benefit packages are reviewed such that current limits and challenges to extending SHI coverage to the informal sector are mitigated. It is also essential to expedite provider payment reform so that DRG payments for inpatient services and capitation payments for primary and outpatient care are implemented.

Fortunately, occupational accident and disease insurance is already integrated into Voluntary Social Insurance law and covers workplace accidents, occupational diseases, work tasks, and commuting. Most developing countries have progressively expanded insurance coverage for occupational disease. Initial efforts in developing countries to establish a social security system have typically focused on protecting wage and salary workers against loss of income due to work, injury, disease, and, gradually, old age, and disability. In Vietnam, employers are required to make monthly contributions to the Occupational Accident and Disease Insurance at a rate of 0.5% of their payroll. Individuals protected by Occupational Accident and Disease Insurance are all those with a labor contract with a term of ≥ 3 months³²⁾.

For some occupational diseases, such as pneumoconiosis, health facilities capable of performing specific tests (eg, chest X-ray and CT scans) are required. In Vietnam, the digital device market continues to grow, with the demand for diagnostic imaging services being influenced

by the expansion of the private healthcare sector and the rise of medical tourism to Vietnam²⁰⁾. Investment in the application of new medical technologies through DOHA's technical transfer program is essential. To detect, diagnose, and treat occupational disease, occupational health physicians are crucial. In Vietnam, the capability of medical personnel within organizations will be improved by the standardization of competencies and training programs. Although short-term training programs in occupational health, covering topics such as occupational diseases, the monitoring of working environments, and the interpretation of imaging results related to pneumoconiosis, are standardized and have been integrated into the curricula of educational institutes and schools²⁸⁾, to address the scarcity of these professionals it could be necessary to establish a dedicated curriculum at medical universities to train doctors to become occupational medicine specialists, similar to programs in countries such as in Thailand, Indonesia, and many European nations³³⁻³⁵⁾.

The large number of Vietnamese workers, both domestic and migrant workers abroad, including in Japan, has led to various challenges, particularly the presence of hazards in the workplace that might pose risks to their health and safety. Therefore, routine medical check-ups for workers are essential for early detection and prevention of occupational diseases, such as pneumoconiosis. By identifying health issues early, these check-ups can reduce long-term treatment costs and productivity losses. To enhance Vietnam's medical check-up system for workers, several measures are recommended. The scope of examinations should be standardized and could be adapted from Japan's annual and specialized medical assessments system, since Japan has worked to develop models for occupational health services and risk assessments that integrate workplace environment monitoring, physician interventions, and health promotion^{36,37)}.

In Japan, workplace health screenings are conducted by accredited medical facilities. To ensure diagnostic accuracy, Japan National Federation of Industrial Health Organization (ZENEIREN) has implemented quality-assurance programs since 1980, including one dedicated to maintaining chest-imaging quality for the diagnosis of pneumoconiosis^{38,39)}. Special hazard-based examinations, such as for noise or silica exposure, should be formulated and linked to the exposure profiles of industries in Vietnam with the mechanism or system for quality control and monitoring, as practiced in Japan by ZENEIREN. The pilot digital reporting of medical check-up results can be launched in some industrial zones/parks, since it may enable prompt diagnosis and enhance data comparability across locations and occupational groups. A mechanism for the computerized transmission of examination summaries to the MoH and VSS is required, similar to Japan's centralized record system. A clear follow-up system, including referral pathways to occupational clinics,

should be mandated. For migrant worker, integrate pre-departure and post-return medical examinations under MOLISA–MoH coordination, with create a unified electronic registry linked to the DOLAB-VSS and facilitate rehabilitation or compensation where appropriate should be prepared. Hence, implementing all these measures in Vietnam could indeed strengthen early detection of occupational diseases among both domestic and returning migrant workers.

Nevertheless, for returnee workers from Japan, the exchange of medical data between Vietnam and Japan offers major potential for diagnostic cooperation, training, and research, but also raises legal, ethical, and technical challenges related to data protection and privacy. Vietnam's legal framework has evolved with the Law on Personal Data Protection (PDPL, 2025) and earlier Decree No. 13/2023/ND-CP, classifying medical imaging as sensitive personal data. These laws require explicit consent, transfer registration, and data impact assessments before cross-border export. However, implementation remains uncertain how authorities will implement the PDPL concerning foreign organizations and individuals, particularly in cases of PDPL violations^{40,41)}.

Japan, on the other hand, operates under a mature privacy framework anchored in the Act on the Protection of Personal Information (APPI) and the Next-Generation Medical Infrastructure Act (NGMIA). APPI requires informed consent for data transfer to non-“adequate” countries (Vietnam not included) and contractual safeguards. The NGMIA allows pseudonymized data for research within certified systems but does not fully cover identifiable data used for live consultations^{42,43)}. Telemedicine regulations further mandate secure transmission and authentication, though cross-border licensing and liability remain unclear⁴⁴⁾. Ultimately, both systems should align to ensure that data exchange enhances patient care and research equity, balancing innovation with strong privacy protection — through bilateral Memoranda of Understanding (MoU) or Data Transfer Agreements (DTAs) that define consent processes, encryption, access control, retention, and breach notification duties. As a result, both countries would building a responsible digital health collaboration model for the Asia region.

Conclusion

In summary, Vietnam has achieved notable advances across the health and OSH systems. Thus, Vietnam is able to implement health checkup initiatives for workers returning from Japan to identify potential occupational diseases, particularly occupational lung disease. Standardized and hazard-based medical check-ups, adapted from Japan's occupational health system, could improve early detection of occupational diseases. Digital reporting pilots and integrated referral mechanisms between MoH, VSS, and occupational clinics would enhance monitoring

and continuity of care, especially for migrant workers.

Finally, cross-border medical data exchange between Vietnam and Japan presents opportunities for collaboration but demands strict alignment of privacy frameworks under the PDPL (2025), APPI, and NGMIA. Establishing bilateral MoUs or DTAs defining consent, encryption, and breach protocols will ensure secure and ethical cooperation.

Authors' contributions

LHI analysed the data, prepared the figures/ tables, and drafted the manuscript. ME, and TY collaborated to edit and revised the manuscript. All authors completed a review process and approved the final version of the work.

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Conflict of interests

The authors declare no conflicts of interest.

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References

1. Ministry of Health Labour and Welfare. Summary of the notification status of employment status of foreign nationals. October 2024. https://www.mhlw.go.jp/stf/newpage_50256.html. <https://www.mhlw.go.jp/content/11655000/001044543.pdf>. Accessed March 8, 2025.
2. Ishizuka F. *International labor migration in Vietnam and the Impact of receiving countries' policies*. Inst Dev Econ; 2013: 414.
3. Japan International Training Cooperation Organization. Technical Intern Training Program. https://www.jitco.or.jp/en/regulation/send/vietnam/sending_organizations.html. Accessed March 15, 2025.
4. Eitoku M, J-P NA, Indriyati LH, et al. The notebook of personal health record system in Japan: Framework of post-retirement health checkups for those formerly employed in hazardous occupations. *Environ Occup Health Pract*. 2026; 8(1): eohp.2025-0053.
5. Ministry of Health Labour and Welfare. Laws and Regulations Database Service. <https://www.mhlw.go.jp/hourei/>. Accessed April 9, 2025.
6. International Labour Organization. *Effective Return and Reintegration of Migrant Workers with special focus on ASEAN Member States*. Supported by the Australian Government and the Canadian Government; 2019.
7. General Statistics Office. Statistical Yearbook of Vietnam 2023. Statistical Publishing House. <https://www.nso.gov.vn/en/default/2024/07/statistical-yearbook-of-2023/>. Accessed June 14, 2025.
8. Nguyen Bich Diep. *The National Institute of Occupational & Environmental Health*. The profile of Occupational Safety and Health in Vietnam. Hanoi 2020.
9. General Statistics Office. Report On Labour Force Survey 2023. <https://www.nso.gov.vn/en/default/2025/03/report-on-labour-force-survey-2023/>. Accessed June 25, 2025.
10. The World Bank. The World Bank In Vietnam. <https://www.worldbank.org/en/country/vietnam/overview>. Accessed May 17, 2025.
11. European Union Agency for Asylum. Medical country of origin information report: Provision of Healthcare in Vietnam: August 2023.
12. Le D-C, Kubo T, Fujino Y, Pham T-M, Matsuda S. Health care system in Vietnam: Current situation and challenges. *Asian Pac J Dis Manag*. 2010; 4(2): 23-30. [CrossRef]
13. Tran Thi Mai Oanh, Nguyen Khanh Phuong, Khuong Anh Tuan. *Sustainability and Resilience in the Vietnamese Health System*. 2021. The Partnership for Health System Sustainability and Resilience (PHSSR). Health Strategy and Policy Institute, Vietnam.
14. Thu NTH, Anh BTM, Khanh LB, Anh PT, Luong DH. Hospital safety preparedness during the COVID-19 pandemic: Lessons learned from Vietnam. *Front Trop Dis*. 2022; 3: 940268. [CrossRef]
15. Takashima K, Wada K, Tra TT, Smith DR. A review of Vietnam's healthcare reform through the Direction of Healthcare Activities (DOHA). *Environ Health Prev Med*. 2017; 22(1): 74. [Medline] [CrossRef]
16. General Statistics Office. Vietnam's health – Evaluation results from the 2021 Economic Census. <https://www.nso.gov.vn/en/default/2024/04/vietnams-health-evaluation-results-from-the-2021-economic-census/>. Accessed July 7, 2025.
17. Ministry of Health. PLAN : For People's health protection, care and promotion 2016-2020. https://extranet.who.int/country-planningcycles/sites/default/files/planning_cycle_repository/vietnam/vietnam_plan_2016-2020.pdf. Accessed June 14, 2025.
18. Dang TH, Nguyen TA, Hoang Van M, Santin O, Tran OMT, Schofield P. Patient-Centered care: Transforming the health care system in Vietnam with support of digital health technology. *J Med Internet Res*. 2021; 23(6): e24601. [Medline] [CrossRef]
19. Kiet H. State and future of radiology and nuclear medicine in Vietnam. *Biomed Imaging Interv J*. 2009; 5(4): e34. [Medline] [CrossRef]
20. TechSci Research report. Vietnam Diagnostic Imaging Market.

- <https://www.techsciresearch.com/news/7207-vietnam-diagnostic-imaging-market.html>. Accessed August 6, 2025.
21. Circular 19/2013/TT-BYT: Specifying implementation guidelines for healthcare service quality management in hospitals. Hanoi: Ministry of Health of Vietnam; 2013. <https://vanbanphapluat.co/circular-19-2013-tt-byt-implementation-guidelines-healthcare-service-quality-management-hospitals>. Accessed May 23, 2025.
 22. Joint Commission International (JCI). JCI-Accredited Organizations. [https://www.jointcommissioninternational.org/who-we-are/accredited-organizations/#sort=%40aoname%20ascending&f:@aocountry=\[Vietnam\]](https://www.jointcommissioninternational.org/who-we-are/accredited-organizations/#sort=%40aoname%20ascending&f:@aocountry=[Vietnam]).
 23. Ng JYS, Ramadani RV, Hendrawan D, Duc DT, Kiet PHT. National health insurance databases in Indonesia, Vietnam and the Philippines. *PharmacoEcon Open*. 2019; 3(4): 517-526. [Medline] [CrossRef]
 24. Myint CY, Pavlova M, Thein KN, Groot W. A systematic review of the health-financing mechanisms in the Association of Southeast Asian Nations countries and the People's Republic of China: Lessons for the move towards universal health coverage. *PLoS One*. 2019; 14(6): e0217278. [Medline] [CrossRef]
 25. Thi P, Chinh T. Occupational Safety and Health in Vietnam. 2014. [https://www.jisha.or.jp/international/training/pdf/\(Vietnam\)_Country_report_Chinh_VN.pdf](https://www.jisha.or.jp/international/training/pdf/(Vietnam)_Country_report_Chinh_VN.pdf). Accessed May 6, 2025.
 26. Matsuda S. An analysis of the Vietnamese system of occupational safety and health and setting priorities with the analytical hierarchy process. *Occup Environ Med*. 1996; 53(4): 281-286. [Medline] [CrossRef]
 27. International Labour Organization. The ILO Global Database on Occupational Safety and Health Legislation (LEGOSH). Vietnam- 2015. https://www.ilo.org/dyn/legosh/en/f?p=14100:1100:0:NO:P1100_ISO_CODE3,P1100_SUBCODE_CODE,P1100_YEAR:VNM,2015. Accessed March 10, 2025.
 28. Tran Anh Than. Health Environment Management Agency. Situation on employees' Health care and occupational disease prevention. Presented at HEMA's office. Hanoi, February 2024.
 29. Vietnam National Institute for Occupational Safety and Health (VNIOSH). Functions and Tasks. <https://vnniosh.vn/en/homepage/>. Accessed March 18, 2025.
 30. Lan TN, Son PH, Trung V, Tu NTH, Keifer M, Barnhart S. Distribution of silica-exposed workers by province and industry in Vietnam. *Int J Occup Environ Health*. 2003; 9(2): 128-133. [Medline] [CrossRef]
 31. MOLISA. Department of Overseas Labour (DOLAB). <https://english.molisa.gov.vn/organizational/2230>. Accessed March 10, 2025.
 32. International Labour Organization. Law on Occupational Safety and Health. No. 84/2015/QH13. The National Assembly Socialist Republic Of Vietnam. Hanoi, July 9, 2015.
 33. Ratanachina J, Sithisaranku P. Two decades' contribution of occupational medicine training in Thailand: Experience from the foundation with a view toward the future. *Asian Biomed* (Res Rev News) 2017; 11(4): 387-392. [CrossRef]
 34. Fakultas Kedokteran Universitas Indonesia (FKUI). Program Studi Spesialis Kedokteran Okupasi. <https://fk.ui.ac.id/program-studi-spesialis-kedokteran-okupasi.html>. Accessed July 6, 2025.
 35. The European Union of Medical Specialists (Union Européenne des Médecins Spécialistes – UEMS). Occupational Medicine. Training. <https://uems-occupationalmedicine.org/training/>. Accessed August 6, 2025.
 36. Japan's Experiences in Public Health and Medical Systems Towards Improving Public Health and Medical Systems in Developing Countries. March 2005. Chapter 7 Occupational Health. Research Group, Institute for International Cooperation, Japan International Cooperation Agency (JICA). <https://openjicareport.jica.go.jp/pdf/11868221.pdf>. Accessed April 17, 2025.
 37. Higashi T. Study on a model for future occupational health: Proposal for an occupational health service model in Japan. *Ind Health*. 2006; 44(4): 541-555. [Medline] [CrossRef]
 38. The Japan National Federation of Industrial Health Organization Quality control program on chest radiography: Report of 2019. ZENEIREN. <http://www.zeneiren.or.jp/cgi-bin/pdfdata/20200312124308.pdf> (in Japanese).
 39. Akima R, J-P NA, Ito K, et al; National Federation of Industrial Health Organization. Perceptual and objective physical quality of chest images: A comparison between digital radiographic chest images processed for cancer screening and pneumoconiosis screening in Japan. *Ind Health*. 2023; 61(4): 260-268. [Medline] [CrossRef]
 40. The National Assembly Socialist Republic Of Vietnam. Law Personal Data Protection. Law No. 91/2025/QH15. Hanoi, June 26, 2025.
 41. Vietnam's New Privacy Law: Key Regulations and A Comparative Analysis of Existing Frameworks. Asia & Data Protection Newsletter (July 9, 2025).
 42. Act on the Protection of Personal Information. Act No. 57 of May 30, 2003. <https://www.japaneselawtranslation.go.jp/en/laws/view/4241/en?>. Accessed October 31, 2025.
 43. About the Next-Generation Medical Infrastructure Law (in Japanese). <https://www8.cao.go.jp/iryou/nintei/nintei.html>. Accessed October 31, 2025.
 44. Yoshida M, Tanaka K, Yamamoto R. An examination of Japan's legal system and issues related to promoting the use of medical data. *Stud Health Technol Inform*. 2025; 327: 1019-1020. [Medline] [CrossRef]

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