

From fragmentation to integration: Can Japan's JIHS deliver a resilient system to deal with health emergencies?

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Abstract: The establishment of the Japan Institute for Health Security (JIHS) in 2025 represents a major institutional reform aimed at enhancing Japan's preparedness for health emergencies in the aftermath of COVID-19. By integrating the National Institute of Infectious Diseases and the National Center for Global Health and Medicine, JIHS seeks to address the long-standing fragmentation of research, clinical practice, and public health responses. In its first year, the institute has made measurable progress in consolidating surveillance and clinical data systems and in expanding research and response networks. However, integration alone does not guarantee effectiveness. Critical challenges remain, including persistent workforce shortages, insufficient incentives for infectious disease research and development, and the complexity of aligning institutional cultures and operational frameworks. This editorial argues that the success of JIHS will depend not only on structural integration but also on sustained investment in human resources, governance reform, and cross-sector coordination. Japan's experience highlights both the promise and the limitations of centralized public health systems and provides important lessons for other countries seeking to build resilient systems to deal with health emergencies.

Keywords: health security, JIHS, pandemic preparedness, system integration, public health governance, Japan

The establishment of the Japan Institute for Health Security (JIHS) in April 2025 marks a pivotal shift in Japan's approach to preparing for health emergencies. The integration of the National Institute of Infectious Diseases and the National Center for Global Health and Medicine reflects a strategic attempt to overcome the structural fragmentation that became evident during the COVID-19 pandemic (1). In principle, such institutional consolidation offers a pathway toward a more coordinated, data-driven, and operationally responsive system.

However, integration itself is not a guarantee of effectiveness. The central question is whether JIHS can translate structural reform into functional capacity. Early efforts have focused on building four core pillars: infectious disease intelligence, research and development (R&D) infrastructure, advanced clinical care, and workforce development (2). Notable progress includes the integration of epidemiological and clinical data platforms and the expansion of national research networks. These developments represent essential steps toward a unified national response system (Figure 1).

And yet, several structural constraints may limit the effects of those reforms.

First, workforce capacity remains a critical bottleneck. Japan continues to face shortages in field

epidemiologists, infectious disease specialists, and trained public health professionals. Existing training programs, including field epidemiology and clinical workforce development initiatives, are not yet sufficient to meet the demands of a fully integrated emergency response system (3,4). Without sustained investment in human resource development and clear career pathways, the operational effectiveness of JIHS may be limited.

Second, the sustainability of infectious disease R&D is uncertain. Unlike other areas of biomedical innovation, infectious disease research is characterized by episodic demand driven by outbreaks. This creates weak and inconsistent incentives for long-term investment. Without policy mechanisms that ensure consistent funding and encourage public-private collaboration, Japan might fail to develop one of the core pillars of its health security strategy.

Third, institutional integration requires more than structural consolidation. Aligning organizational cultures, governance systems, and operational practices across previously independent institutions is inherently complex. Failure to achieve such alignment could result in persistent inefficiencies despite formal integration. In this context, governance reform and leadership will play a decisive role in determining whether JIHS can function

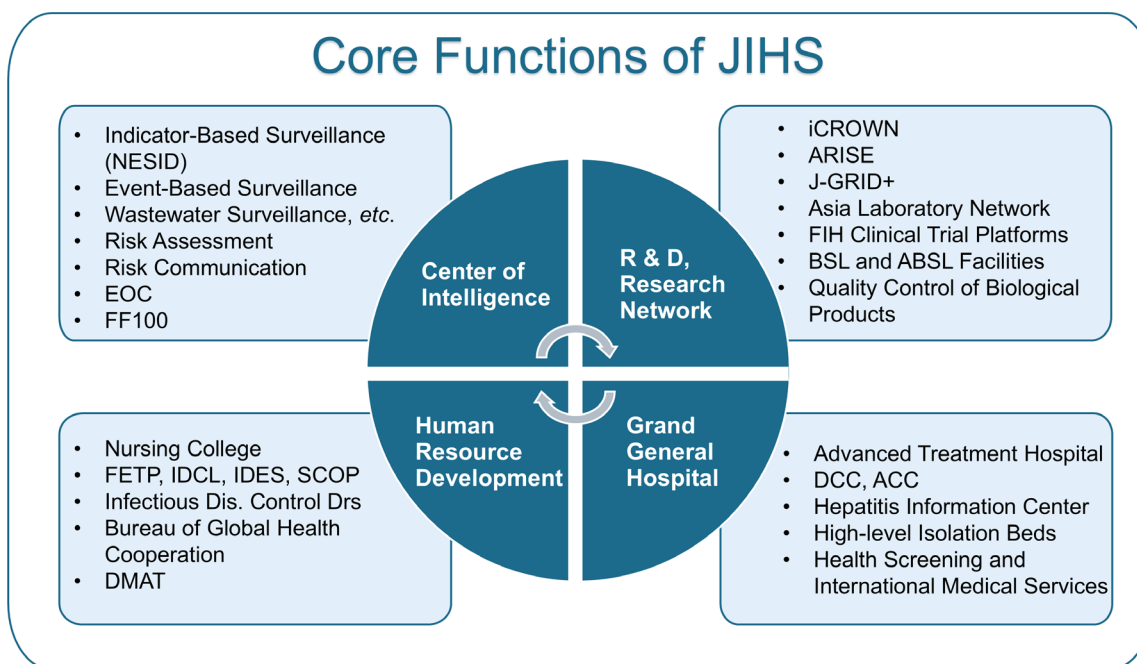


Figure 1. Core functional framework of the Japan Institute for Health Security (JIHS). The framework illustrates four integrated pillars: (1) intelligence and surveillance, including indicator-based surveillance (NESID), event-based surveillance, and wastewater surveillance, as well as risk assessment and risk communication, supported by the emergency operations center (EOC) and First Few Hundred (FF100) investigations; (2) research and development (R&D) and research networks, including iCROWN, ARISE, J-GRID+, and the Asia Laboratory Network, as well as first-in-human (FIH) clinical trial platforms, biosafety level (BSL) and animal biosafety level (ABSL) facilities, and quality control of biological products; (3) advanced clinical care, supported by specialized hospitals, disease control centers, and high-level isolation units; and (4) human resource development, including training programs and professional networks. Together, these components form the foundation of an integrated national system for infectious disease preparedness and response. *Abbreviations:* EOC, Emergency Operations Center; FF100, first few hundred cases and contacts investigation; R&D, research and development; iCROWN, Infectious Disease Clinical Research Network (Japan); ARISE, ARO Alliance for Southeast and East Asia; J-GRID+, Japan Initiative for Global Research Network on Infectious Diseases; FIH, first-in-human; BSL, biosafety level; ABSL, animal biosafety level; NESID, National Epidemiological Surveillance of Infectious Diseases; DCC, Disease Control and Prevention Center; ACC, AIDS Clinical Center; FETP, Field Epidemiology Training Program; IDCL, Infectious Disease Crisis Leadership Program; IDES, Infectious Disease Emergency Specialist; SCOP, Senior Clinical Operations Program; Dis, Diseases; Drs, Doctors; DMAT, Disaster Medical Assistance Team.

as a truly unified system.

From a global perspective, Japan's experience reflects a broader trend toward centralized public health institutions in a post-pandemic era. International analyses of pandemic prevention, preparedness, and response (PPPR) consistently emphasize the importance of integrating surveillance, data systems, and response capacity (5). However, global evidence also suggests that integration must be accompanied by sustained investment in workforce, governance, and cross-sector coordination to be effective.

JIHS's first year demonstrates both the potential for and limitations of institutional integration. While early achievements are encouraging, the long-term success of the Institute will depend on whether it can address underlying structural challenges. Integration should be viewed not as an endpoint, but as a foundation upon which a resilient and adaptive system to deal with health emergencies must be built.

Japan now stands at a critical juncture. If JIHS can successfully align its structural reforms with its functional capacity—particularly in workforce development, R&D sustainability, and governance—it

has the potential to become a model for integrated health security systems. If not, the risk remains that integration will be largely symbolic, with a limited impact on Japan's real-world emergency response.

Funding: None.

Conflict of Interest: The authors have no conflicts of interest to disclose.

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Received April 7, 2026; Accepted April 22, 2026.

Released online in J-STAGE as advance publication April 25, 2026.

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