

ACCESS Japan Registry: Toward a nationwide evidence platform for foreign visitors requiring emergency hospitalization in Japan—Rationale, design, and governance of a multicenter registry

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Abstract: Japan has experienced a rapid increase in inbound tourism, with a record 42,683,600 foreign visitors in 2025, a 15.8% increase from the previous year and well above the pre-pandemic peak of 31.88 million in 2019, but such short-term visitors are excluded from Japan's public health insurance system, exposing patients and institutions to substantial financial and clinical risks. Despite growing clinical and policy demand, no comprehensive national database of emergency hospitalizations among inbound foreign visitors exists. Against this background, we established the ACCESS Japan Registry (Assessment of Cross-Cultural Medical Access and Emergency & Support Systems for Foreign Patients in Japan), the first multicenter registry in Japan that is designed for nationwide expansion and that targets inbound foreign visitors who require emergency hospitalization in Japan. Foreign nationals on short-term visas who require emergency hospitalization are registered in the registry, and patient demographics, clinical data (diagnosis per the International Classification of Diseases, 10th Revision (ICD-10), length of stay, outcomes), administrative and financial data (hospitalization costs, unpaid bills), and language support information are collected *via* Research Electronic Data Capture (REDCap). The ACCESS Japan Registry will provide the first systematic, multicenter evidence base on emergency hospitalizations of inbound foreign visitors in Japan, informing healthcare policy, international emergency medicine, and global travel medicine research. Here we describe why such a platform is needed, how it was developed, how it is governed, and what it can and cannot deliver.

Keywords: inbound foreign visitors, emergency hospitalization, registry, travel medicine, Japan

1. Why the ACCESS Japan Registry is needed

Global expansion of international travel has fundamentally transformed the landscape of emergency medicine and public health worldwide. Japan has emerged as one of the world's most dynamic tourist destinations, with inbound visitor numbers increasing more than fourfold over the decade prior to the COVID-19 pandemic, reaching 31.88 million in 2019 (1). Inbound travel has since recovered and surpassed that level: 42,683,600 foreign visitors entered Japan in 2025, a 15.8% increase over 2024 and the highest figure ever recorded (2). Scale of the population at risk is therefore substantially larger today than pre-pandemic figures on which most existing evidence is based. Geographic dispersal of tourists, facilitated by low-cost carriers and regional revitalization policies, has extended the reach of inbound tourism to rural and semi-urban areas, meaning that acute-care

hospitals across the country—not only major urban centers—are increasingly confronting the challenge of managing foreign patients in emergency settings (3).

Short-term visitors to Japan are, by definition, excluded from the national public health insurance system, as coverage under the system is contingent upon residency status (4). Consequently, full cost of emergency medical care falls on the patient, generating multiple layers of clinical and institutional risk. From the patient's perspective, financial barriers may delay presentation to healthcare facilities and compromise adherence to recommended treatment. From the institutional perspective, unpaid medical bills represent a growing operational concern (5), particularly when patients are repatriated before discharge or before financial settlement can be arranged (6). Language and cultural barriers further complicate care delivery, contributing to diagnostic delays, miscommunication regarding consent

and treatment, and reduced patient satisfaction (3).

Despite scale and urgency of these challenges, the epidemiological profile of inbound foreign visitors who require emergency hospitalization in Japan remains almost entirely undocumented. Existing national statistics and published studies have predominantly focused on resident foreign nationals or on outpatient emergency department visits rather than on hospitalized short-term visitors (3). A systematic review of studies conducted in Japanese emergency departments identified significant heterogeneity across institutions and highlighted the absence of nationally representative data on this population (3). This information gap is not unique to Japan; to our knowledge, no multicenter registry focusing specifically on emergency hospitalizations among inbound foreign visitors has been established in any country.

To address this critical gap, we established the ACCESS Japan Registry (Assessment of Cross-Cultural Medical Access and Emergency & Support Systems for Foreign Patients in Japan), a multicenter observational registry, designed for nationwide expansion, targeting short-term foreign visitors who require emergency hospitalization in Japan. In this Perspective we describe rationale, design, data collection protocol, and governance of the registry, and outline the anticipated research outputs and policy implications, together with the registry's current stage of development and its principal limitations.

2. Development and current status

The registry was conceived in fiscal 2025, prompted by single-center experience at the National Center for Global Health and Medicine, where clinical and financial consequences of emergency hospitalization among uninsured short-term visitors were evident in daily practice but were not captured by any existing data source (7). The multicenter infrastructure—the common data dictionary, the REDCap instrument, and the participation framework—was developed during 2025 and 2026, and hospitalizations occurring on or after 1 April 2022 are eligible for retrospective registration so that the post-pandemic recovery of inbound travel is covered. Central ethical approval for the multicenter registry was granted by the Institutional Review Board of the Japan Institute for Health Security (JIHS) on 1 July 2026, and the first participating hospital obtained local institutional authorization on 10 July 2026. As of 10 August 2026, one hospital had completed local authorization and was contributing data, three further hospitals had confirmed participation and were completing local authorization or system setup, and an additional fourteen hospitals were at earlier stages of the participation process. Because data entry began only recently, the number of registered cases remains very small; we therefore do not report case counts at this stage and state transparently that the registry is in an early expansion phase, with operational data to be reported once a meaningful volume of cleaned

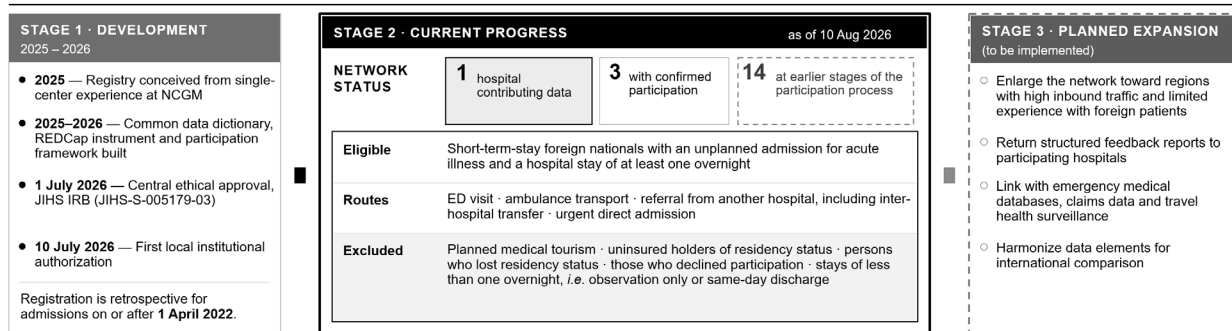
records has accumulated.

The primary objective of the ACCESS Japan Registry is to construct a comprehensive multicenter case database of inbound foreign visitors who require emergency hospitalization in Japan, with the explicit intention of expanding toward nationwide coverage. This infrastructure will serve as foundational evidence base for subsequent analytical studies addressing the following domains: *i*) epidemiological profile of emergency hospitalizations among inbound foreign visitors, including disease patterns, routes of access to care, severity at presentation, and clinical outcomes; *ii*) healthcare economic challenges, including magnitude of unpaid medical bills at discharge, proportion that remains uncollected after institutional billing and recovery process, and factors predicting non-payment; *iii*) role of language and cultural barriers in care delivery, including utilization and mode of delivery of medical interpretation services; *iv*) prognostic determinants and factors influencing length of stay and clinical outcome; and *v*) evidence-based policy recommendations for improving emergency healthcare systems for foreign visitors and for advancing international travel medicine practice. Overview of the ACCESS Japan Registry is presented in Figure 1.

The ACCESS Japan Registry is a multicenter, non-interventional observational registry study. Data are collected retrospectively from medical and administrative records generated during routine clinical care; no additional examinations, interventions, or patient contact are conducted for research purposes. Participating facilities are acute-care hospitals in Japan that have agreed to contribute data through the registry platform. Recruitment of participating institutions is ongoing, with outreach directed at hospitals with established emergency and acute-care departments, particularly those with prior experience in managing foreign patients.

The registry platform is built on REDCap (Research Electronic Data Capture), a validated, web-based data management system developed at Vanderbilt University (8) and operated on an electronic data capture system hosted at the University of Osaka (9). Access to servers and systems is restricted by user accounts and passwords, and a full audit trail is recorded. Data are entered electronically by designated personnel at each participating facility *via* a secure internet connection. The registry is jointly administered by JIHS and the University of Osaka. Each entry is assigned a unique study identification code with no systematic relationship to the patient's medical record number, ensuring that personally identifiable information is not transmitted to or stored within the central database; because each participating hospital retains the local linkage key, the central dataset is more accurately described as coded (pseudonymized) rather than anonymized. A detailed schematic overview of the registry, covering patient flow and eligibility, the four data collection domains, coding and storage, governance and access tiers, and anticipated research and policy

A. DEVELOPMENT PATHWAY AND CURRENT STATUS



B. DATA COLLECTED, DATA FLOW AND GOVERNANCE

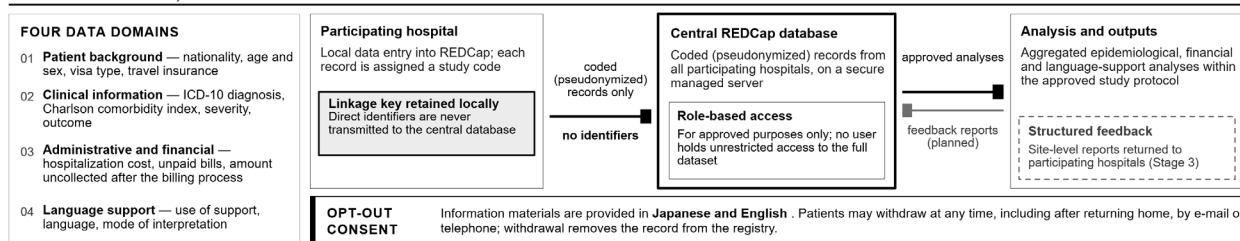


Figure 1. Development, current operation, and planned expansion of the ACCESS Japan Registry. Abbreviations: ACCESS Japan, Assessment of Cross-Cultural Medical Access and Emergency & Support Systems for Foreign Patients in Japan; JIHS, Japan Institute for Health Security; REDCap, Research Electronic Data Capture; ICD-10, International Classification of Diseases, 10th Revision; PII, personally identifiable information.

impact, is provided as Supplementary Figure S1 (<https://www.globalhealthmedicine.com/site/supplementaldata.html?ID=126>).

3. Registry framework and governance

3.1. Eligibility criteria and operational definitions

Eligible participants are foreign nationals whose residency status in Japan is classified as "short-term stay" (*i.e.*, individuals without residency status under the Immigration Control and Refugee Recognition Act) who require emergency hospitalization during their stay in Japan. For registry purposes, emergency hospitalization is defined as an unplanned inpatient admission arising from an acute condition, irrespective of the route of access: presentation to the emergency department, arrival by ambulance, urgent referral from another facility, and urgent direct admission to a ward are all eligible. A formal inpatient admission of at least one overnight stay is required; emergency department observation, short-stay observation, and same-day admission and discharge without an overnight inpatient stay are not eligible. Patients arriving by inter-hospital transfer are eligible and are captured as referred cases in the route-of-access variable, with hospitalization registered by the hospital that provides the inpatient care; because no central identifier links records across institutions, the referral variable is used to flag episodes that may belong to a single patient pathway across facilities.

The following cases are excluded from the registry: *i*) cases of planned medical tourism in which the

hospitalization was part of a pre-arranged treatment plan for a condition identified prior to entry into Japan, and treatment was completed as planned; *ii*) individuals who, despite holding a Japanese residency visa (*e.g.*, diplomatic personnel), are not enrolled in the public health insurance system; *iii*) individuals who have lost their legal residency status due to overstay or expiry of a visa other than a short-term stay visa; and *iv*) individuals who explicitly decline participation in the registry. These exclusion criteria were developed to define a clinically and administratively homogeneous target population of uninsured short-term visitors, thereby ensuring interpretability and policy relevance of the resulting dataset.

3.2. Data collection and data quality

All data collected through the ACCESS Japan Registry are derived exclusively from existing medical and administrative records generated during routine clinical care. The registry captures four domains.

Domain 1: Patient Background—age, sex, nationality, country of residence, primary language, purpose of travel, number of days elapsed between arrival in Japan and symptom onset or hospital presentation, intended duration of stay, and travel insurance status.

Domain 2: Clinical Information—chief complaint, major pre-existing conditions (classified by diagnostic category), Charlson comorbidity index (CCI) (10), mode of arrival at the hospital, severity at triage (based on standardized triage criteria), admitting clinical department, primary diagnosis (coded per ICD-10), total length of hospital stay, length of intensive care unit

stay where applicable, surgical or invasive procedures performed, and clinical outcome at discharge.

Domain 3: Administrative and Financial Information—total hospitalization costs, presence and amount of unpaid bills at the time of discharge, and amount that remains uncollected at close of each institution's standard billing and recovery process, recorded as an observed institutional outcome rather than as a subjective estimate of recoverability.

Domain 4: Language Support Information—use of professional medical interpretation services, language of interpretation, and mode of interpretation (in-person, telephone, or video). Each data element was selected based on its relevance to the study objectives and its availability within the routine clinical record. Total estimated data entry time per case is approximately 15 to 20 minutes.

Cases are identified at each participating hospital by screening admission records and emergency department logs for patients without Japanese public health insurance, and all eligible cases within the study period are registered consecutively to minimize selection at the case level. Triage severity is recorded using each institution's standardized triage scale, and the scale used is captured as a variable so that heterogeneity can be handled in analysis. Diagnoses are coded with ICD-10 by trained local personnel using a shared coding list, and outcomes at discharge are taken from discharge summary. Automated range and logic checks are implemented in REDCap at data entry, and the coordinating office performs central checks for missing values, outliers, and internally inconsistent records, with queries returned to the contributing site for resolution.

3.3. Ethical framework, data protection, and governance

The study was conducted in accordance with the Declaration of Helsinki and the Ethical Guidelines for Medical and Biological Research Involving Human Subjects issued by the Ministry of Education, Culture, Sports, Science and Technology; the Ministry of Health, Labour and Welfare; and the Ministry of Economy, Trade and Industry of Japan. Central ethical approval has been obtained from the Institutional Review Board of JIHS (approval number: JIHS-S-005179-03), and each participating hospital additionally obtains authorization from its institutional director before starting data entry, in accordance with the Japanese multi-institutional review framework. Secondary analyses using registry data are conducted under separately developed research protocols, each of which requires independent ethics committee approval prior to initiation. Central ethical review for all participating institutions, including the University of Osaka, was provided by the JIHS Institutional Review Board under a single-review procedure; no separate ethics committee review was conducted at collaborating institutions. The University of Osaka participates as a co-research institution responsible for the registry data-

management infrastructure and obtained institutional authorization from its director (authorization number: K25496) before commencing its registry-related data-management activities. Each participating hospital likewise obtains institutional authorization before beginning data entry.

Given challenges of obtaining individual informed consent from short-term foreign visitors—including early repatriation, language barriers, and the large number of eligible cases—consent is obtained through an opt-out procedure (11,12). Information about the registry is publicly disclosed on the JIHS website (13), through institutional notice boards at participating hospitals, and in written materials provided to eligible patients, where feasible. Patients or their representatives who wish to decline participation may do so by contacting the designated study coordinator at their treating hospital. Because many eligible patients cannot read Japanese and may leave Japan shortly after discharge, opt-out materials are provided in both Japanese and English at every participating hospital, and the opt-out contact route remains available after repatriation by e-mail as well as by telephone.

Data access and utilization rights are stratified according to institutional role (Table 1). Access is role-based and limited to authorized personnel for approved registry purposes, and no user category has unrestricted access to the complete dataset. Investigators at JIHS and the University of Osaka, as the central coordinating institutions, may access the complete registry dataset for registry management, data quality assurance, and approved analyses; use of such data for publication or conference presentation is subject to deliberation by the full research team. Participating institutions may access their own institutional data in full. They may access aggregate registry data upon request to the coordinating office. Access to registry-wide line-level data, whether or not intended for publication or presentation, requires a formal application and deliberation by the full research team.

4. Potential contribution, limitations, and future directions

The ACCESS Japan Registry is expected to generate the first systematic, multicenter evidence on clinical and socioeconomic profiles of inbound foreign visitors who require emergency hospitalization in Japan. Preliminary analyses are anticipated to characterize distribution of presenting diagnoses, with particular interest in conditions that are disproportionately prevalent in travelers—including infectious diseases, cardiovascular emergencies, trauma, and psychiatric crises—as well as conditions that may be complicated by delayed presentation attributable to financial deterrents or language barriers. The registry will also enable an analysis of financial burden borne by healthcare institutions, including frequency and magnitude

Table 1. Data Utilization Policy

Data Type	JHHS / the University of Osaka	Participating Institutions
Own institutional data	Full access for approved registry purposes	Full access for approved registry purposes
Aggregate registry data (no raw data)	Full access for approved registry purposes	Upon request to coordinating office
Full registry line-level data (not for publication)	Registry management, quality assurance, and approved analyses only	Application + team deliberation
Full registry line-level data (for publication / presentation)	Team deliberation	Application + team deliberation

of unpaid bills and factors associated with successful or unsuccessful debt recovery, an area of immediate operational relevance to hospital administrators and health policy makers alike.

Beyond its domestic significance, the ACCESS Japan Registry is positioned to make a substantive contribution to the international field of travel medicine. Emergency hospitalization represents the most severe end of the travel-related illness spectrum, yet it remains least systematically studied. Existing travel medicine research has predominantly focused on outpatient presentations, infectious diseases among returning travelers, and pre-travel consultation practices. The ACCESS Japan Registry addresses a distinct and underrepresented dimension of this field by capturing in-country emergency hospitalizations in real time, thereby providing data that cannot be obtained from traveler surveillance systems or post-travel health registries.

Several limitations should be acknowledged at this early stage. Participation is voluntary and current participants are weighted toward hospitals with prior experience in caring for foreign patients, so the present dataset is not nationally representative and is subject to selection bias at institutional level. Because no population denominator exists for foreign visitors at risk within each hospital catchment area, the registry cannot estimate national incidence rates of emergency hospitalization; it can describe case mix, care processes, and outcomes of registered episodes. Interpretation of the interpreting variables is likewise constrained: the registry records whether and how interpretation was used, but it does not measure interpretation quality or effectiveness of interpretation on clinical outcomes. Patient pathways that span more than one hospital may be represented by more than one record, and cases managed without an overnight inpatient admission are outside the registry scope. Finally, retrospective abstraction from routine records limits granularity and completeness of some variables, particularly financial outcomes recorded after discharge.

The registry infrastructure also has potential for future expansion. Four directions are prioritized. First, the participating network will be enlarged beyond the current early adopters toward hospitals in regions with high inbound traffic but limited experience with foreign

patients, which is the practical route to genuine national coverage. Second, structured feedback reports will be returned to participating hospitals, so that participation delivers immediate operational value and sustains data quality. Third, network linkage with emergency medical databases, insurance claims data, and international travel health surveillance systems could substantially enhance the registry's analytical power and facilitate cross-national comparisons. Fourth, harmonized data elements will be developed to enable international comparison with other high-volume destination countries. Moreover, the methodological framework established by this registry—including the opt-out consent model, REDCap-based data capture, and ethical governance structure for multi-institutional data sharing—may serve as a replicable model for similar registry initiatives in other high-volume tourist destination countries.

The ACCESS Japan Registry represents the first systematic attempt to document and analyze emergency hospitalizations among inbound foreign visitors in Japan through a multicenter platform designed for nationwide expansion. By capturing comprehensive clinical, administrative, and socioeconomic data from acute-care hospitals in Japan, the registry will generate evidence that is urgently needed to improve the quality and equity of emergency care for foreign visitors, to address the financial sustainability of healthcare institutions, and to inform evidence-based policy in both domestic healthcare governance and international travel medicine. We invite eligible acute-care institutions across Japan to participate in this registry and contribute to creation of a globally valuable epidemiological resource.

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