iCROWN
Infectious Disease Clinical Research NetwOrk With National Repository

Creating a united research front against infectious diseases

Project Entrusted by the Ministry of Health, Labour and Welfare

Infectious disease Clinical Research netwOrk With National repository (iCROWN) project

MHLW 厚生労働省
Ministry of Health, Labour and Welfare of Japan

JIHS
Japan Institute for Health Security

Background and Purpose

During the early stages of the Coronavirus disease 2019 (COVID-19), the response in Japan was primarily centered around Designated Medical Institutions for Infectious Diseases that provided inpatient care for patients with Class I and Class II Infectious Diseases. However, the institutions where COVID-19 patients were admitted were not necessarily those conducting clinical research, which posed challenges in conducting clinical trials. Furthermore, due to insufficient industry-government-academia collaboration for vaccine and therapeutic drug development in normal times, the development of domestical vaccines and therapeutic drugs took longer than in other countries.

In response to these challenges, the REpository of data and Biospecimen of INfectious Disease (REBIND) was established in FY2021 to generate scientific knowledge about infectious diseases and promote the R&D of pharmaceuticals and other treatments. It began collecting and storing specimens and data and providing them to those who wished to utilize them. In FY2024, the Infectious disease Clinical Research netwOrk With National repository (iCROWN) was established as an extension of REBIND. It established a system for conducting clinical research on infectious diseases at multiple institutions in cooperation with medical institutions, local governments, and other organizations in normal times in preparation for the occurrence of an infectious disease crisis.

Starting in FY2025, in order to be able to quickly detect the outbreaks of infectious diseases, assess their impact, and implement appropriate countermeasures, Designated Medical Institutions for Specified and Class I Infectious Diseases that serve as Research-Implementing Institutions will establish a system to further advance clinical research. This will be achieved through collaboration with Research-Promoting Institutions that provide academic support for conducting studies and Semi-Research-Implementing Institutions that support the collection of specimens and data.

From FY2021

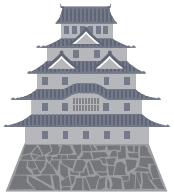
REBIND

- Prospectively collect and store specimens and clinical information from participating medical institutions (the repository).
- Provide collected specimens and data to researchers and other parties who wish to utilize them upon request.
- Initially, the only targeted infectious disease was COVID-19, but the scope was later expanded to include pediatric hepatitis of unknown etiology and mpox.

FY2024

iCROWN project

Including REBIND

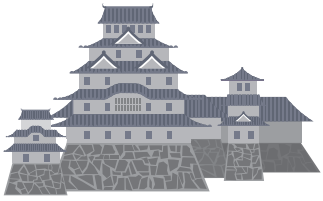


- The iCROWN project was launched as a developmental expansion of REBIND.
- Functions in addition to those previously conducted by REBIND: 1) Collaborate with medical institutions and local governments in normal times. 2) Establish a system for conducting clinical research of infectious diseases at multiple institutions.
- Nationwide, 14 medical institutions serve as Research-Implementing Institutions (Designated Medical Institutions for Specified and Class I Infectious Diseases).
- The targeted infectious diseases are severe acute respiratory infections (including COVID-19), mpox, pediatric hepatitis of unknown etiology, and specimens collected through genomic surveillance at the time of entry into Japan.

FY2025

iCROWN project

Maintain repository functions.



- With regard to Research-Implementing Institutions, the government aim to incorporate four Designated Medical Institutions for Specified Infectious Diseases and one Designated Medical Institution for Class I Infectious Diseases in each prefecture.
- Cooperate with Research-Promoting Institutions and Semi-Research-Implementing Institutions.
- Maintain a repository for providing and storing specimens and clinical information.
- Targeted infectious diseases are expected to expand further variety.

Primary Activities

Clinical Research

In order to swiftly advance clinical research during emergencies, it is necessary to ensure the smooth operation of the network in normal times. At iCROWN, we promote clinical research across multiple institutions to identify and address not only network-related challenges but also each institution-specific issue in advance.

Accomplishments for FY2024

- Research contributing towards developing frameworks for infectious disease crisis management "Scientific Knowledge on Domestically Approved Drugs for Post-Exposure Prophylaxis and Treatment of Highly Pathogenic Agents"*
- Study Assessing Correlations at Different Specimen Collection Sites Related to Severe Acute Respiratory Infections (SARI)*
- Phase II Investigator-Initiated Clinical Trial to Evaluate the Efficacy and Safety of T-705 Injection (Favipiravir) in Combination with Oseltamivir for Influenza*

*These studies were conducted with the support of public research funding.

Fostering Relationships

iCROWN places great importance on the face-to-face relationships between researchers. We regularly organize opportunities for in-person interaction, personnel exchange, and the sharing of ideas.

Accomplishments for FY2024

- Institutional Coordination Meeting (24 medical institutions and 10 local governments participate.)

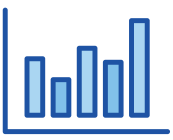
Pursuit of Knowledge

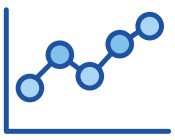
Many institutions (researchers) are involved in iCROWN. In order to respond to more advanced and cutting-edge clinical research, we also focus on providing opportunities for researchers to learn from one another.

Accomplishments for FY2024

- Training seminar for Research-Implementing Institutions (9 institutions participate.)

Communication





We believe that widely disseminating results obtained through iCROWN will contribute to health security. Our efforts focus not only on sharing information with researchers but also with the general public.

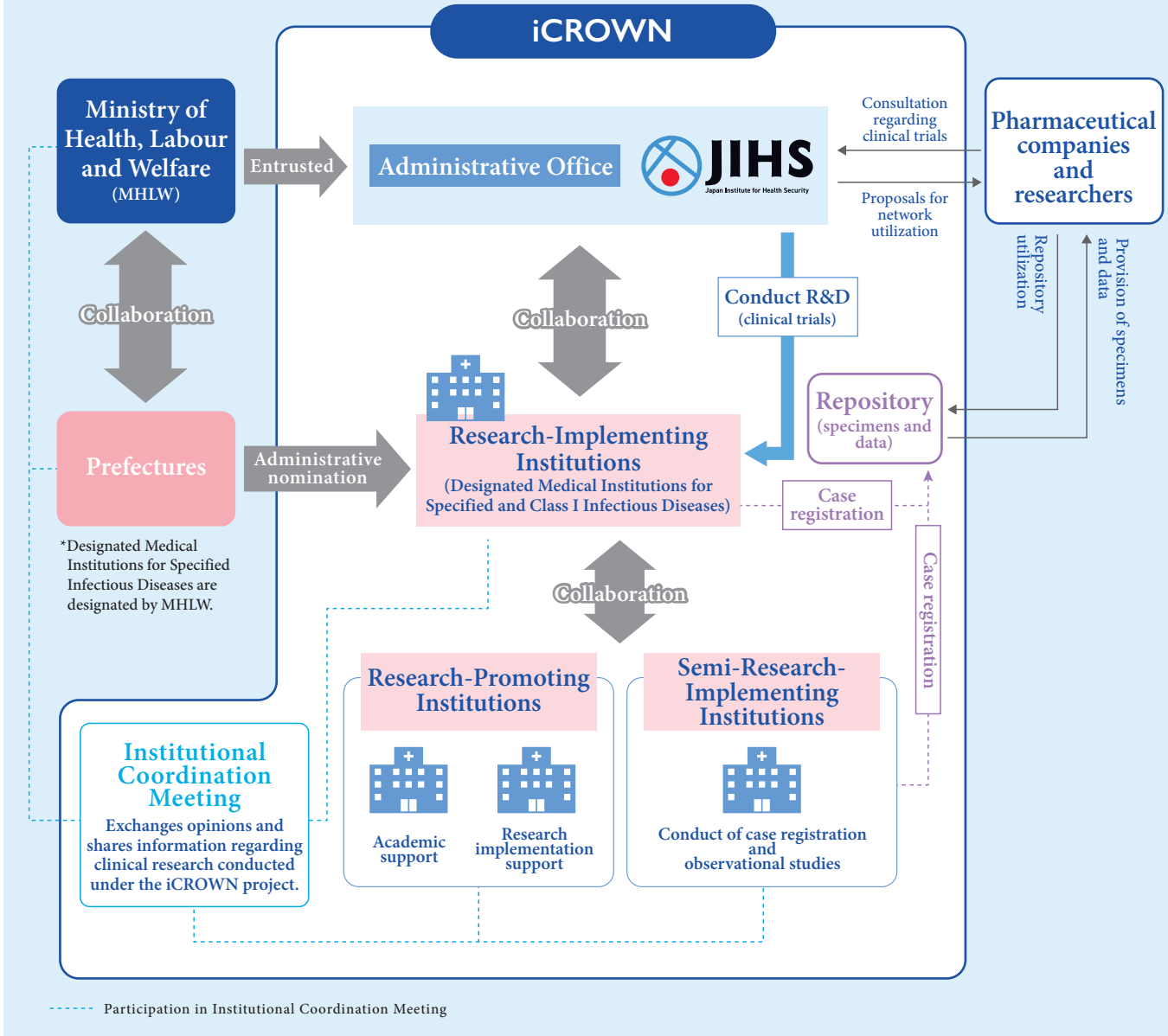
Accomplishments for FY2024

- February 14, 2025: 2024 iCROWN Project Symposium
  Advancing pharmaceutical development during a health crisis ~Lessons learned from the COVID-19 pandemic: Issues surrounding placebo-controlled double-blind comparative trials~

Project overview

- Establish a network of medical institutions (Designated Medical Institutions for Infectious Diseases, etc.) capable of cooperating on R&D for infectious disease drugs.
- Comprehensively identify and share R&D challenges during infectious disease crises.
- Establish an R&D system that can respond quickly in the event of an infectious disease crisis.
- Integrate various activities related to infectious disease clinical research.
- Provide a portion of the specimens and data collected in the iCROWN repository from participating medical institutions to pharmaceutical companies and researchers who wish to utilize them.

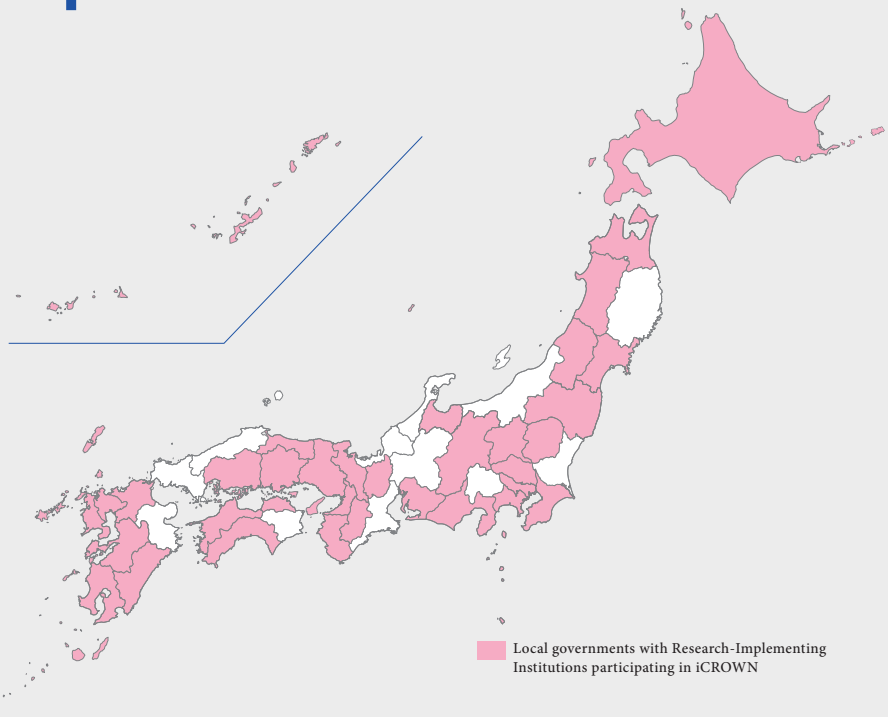
Implementation structure of iCROWN



The Japan Institute for Health Security (JIHS) was established in FY2025 through the merging of the National Center for Global Health and Medicine and the National Institute of Infectious Diseases.
JIHS has been entrusted by the Ministry of Health, Labour and Welfare to operate the iCROWN project.

Medical institutions participating in or agreeing to participate in iCROWN (as of August 2025)

In FY2024, with the participation of 14 Designated Medical Institutions for Specified and Class I Infectious Diseases, iCROWN was established. In FY2025, iCROWN will be expanded further with the participation of the following Research-Implementing Institutions, Research-Promoting Institutions, and Semi-Research-Implementing Institutions. (Only medical institutions that have given permission are listed. Corporate and organization names have been omitted.)



Research-Implementing Institutions

No mark: Designated Medical Institutions for Class I Infectious Diseases
[Spec.]: Designated Medical Institutions for Specified Infectious Diseases

Municipality name	Research-Implementing Institutions
Hokkaido	Sapporo City General Hospital
Aomori	Aomori Prefectural Central Hospital
Miyagi	Tohoku University Hospital
Akita	Akita University Hospital
Yamagata	Yamagata Prefectural Central Hospital
Fukushima	Fukushima Medical University Hospital
Tochigi	Jichi Medical University Hospital
Gunma	Gunma University Hospital
Saitama	Saitama Medical University Hospital
Chiba	IUHW Narita Hospital
	[Spec.] Japanese Red Cross Narita Hospital
Tokyo	Tokyo Metropolitan Cancer and Infectious Diseases Center Komagome Hospital
	[Spec.] National Center for Global Health and Medicine
Kanagawa	Yokohama Municipal Citizen's Hospital
Toyama	Toyama Prefectural Central Hospital
Nagano	Nagano Prefectural Shinshu Medical Center
Shizuoka	Shizuoka City Shizuoka Hospital
Aichi	Japanese Red Cross Aichi Medical Center Nagoya Daini Hospital
	[Spec.] Chitahanto Rinku Hospital
Shiga	Otsu City Hospital
Kyoto	University Hospital, Kyoto Prefectural University of Medicine
Osaka	Osaka City General Hospital
	[Spec.] Rinku General Medical Center
Hyogo	Kobe City Medical Center General Hospital
Nara	Nara Medical University Hospital
Wakayama	Japanese Red Cross Wakayama Medical Center
Tottori	Tottori Prefectural Kousei Hospital
Okayama	Okayama University Hospital
Hiroshima	Hiroshima University Hospital
Kagawa	Kagawa Prefectural Central Hospital
Ehime	Ehime University Hospital
Kochi	Kochi Health Sciences Center
Fukuoka	Fukuokahigashi Medical Center
Saga	Saga-ken Medical Centre Koseikan
Nagasaki	Nagasaki University Hospital
Kumamoto	Kumamoto City Hospital
Miyazaki	Miyazaki Prefectural Miyazaki Hospital
Kagoshima	Kagoshima University Hospital
Okinawa	University of the Ryukyus Hospital

Research-Promoting Institutions

Research-Promoting Institutions agreeing to participate in iCROWN as of FY2025

- Hokkaido University Hospital
- National Cancer Center Hospital East
- Keio University Hospital
- National Cancer Center Hospital
- Juntendo University Hospital
- St. Marianna University Hospital
- Yokohama City University Hospital
- Nagoya University Hospital
- Fujita Health University Hospital
- The University of Osaka Hospital
- Kyushu University Hospital

Semi-Research-Implementing Institutions

In FY2025, 14 institutions agreed to participate.

The iCROWN repository

iCROWN collects specimens and clinical information from Research-Implementing Institutions and Semi-Research-Implementing Institutions and stores the prepared specimens, clinical information, and genome analysis information obtained from the specimens. These specimens and data can be utilized for research that elucidates pathogenesis, identifies factors contributing to aggravation and prognosis, improves diagnostic and treatment methods, and contributes to pharmaceutical development. By widely utilizing these specimens and data in various medical research and development activities, the goal is to promote advances in not only infectious diseases but also medicine in general.

Targeted infectious diseases (as of August 2025)

- Severe acute respiratory infections (including Coronavirus disease 2019)
- Mpox
- Pediatric hepatitis of unknown etiology
- Specimens collected through genomic surveillance at the time of entry into Japan

*The addition of Priority Infectious Diseases to the list of targeted infectious diseases is planned. The iCROWN Administrative Office will begin operations as soon as the specimen collection system is in place.

Collected from Research-Implementing Institutions and Semi-Research-Implementing Institutions

Specimens

- Blood
- Swabs (nasopharyngeal, skin, etc.)
- Saliva
- Stool
- Sputum

*Specimens collected vary depending on the infectious disease.

Clinical information

- Basic information at the time of admission
- Travel information
- History of COVID-19 infection
- Medical history/Complications
- Vital signs at the time of admission
- Pathogen testing
- Medications used during hospitalization
- Treatments performed during hospitalization
- Outcome at the time of discharge
- Laboratory test results during hospitalization

Etc.

Materials provided to users

Specimens

- Human DNA
- Plasma
- PBMC (peripheral blood mononuclear cells)
- Swabs (nasopharyngeal, skin, etc.)
- Saliva
- Stool
- Sputum
- Isolated pathogens (isolated from the above swabs, saliva, etc.)

Clinical information

- Collected data (excluding data that can identify individuals)

Genome analysis information

- Human genome information
- Pathogen genome information

Expectations in the event of an infectious disease crisis

In order to swiftly implement evidence-based countermeasures in the event of an infectious disease crisis, it is expected that the necessary information (specimens, data, etc.) will be collected quickly, and scientific insights that contribute to the understanding of pathogenesis and infectious disease countermeasures will be generated.
Furthermore, by utilizing iCROWN, it is expected that clinical trials of pharmaceuticals and other products will be able to be launched swiftly at multiple institutions. The provision of collected specimens and data to interested pharmaceutical companies and researchers will also contribute to the rapid practical application of pharmaceuticals and other products within Japan.

iCROWN publishes project overviews, Q&As, and other related information.
We plan to provide updates with the latest information as it becomes available.

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iCROWN home page
https://icrown.jihs.go.jp

Inquiry desk

General inquiries related to iCROWN

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Inquiries related to the utilization of the iCROWN Repository

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